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THE UNDER SECRETARY OF STATE  
WASHINGTON

S/S 3033

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February 26, 1970

NSC Under Secretaries Committee

MEMORANDUM TO THE PRESIDENT

SUBJECT: A Program for International Cooperation  
in the Uranium Enrichment Field

Summary and Recommendations:

I. Recommendations:

The Under Secretaries Committee recommends that subject to your approval, and following appropriate consultations with the Joint Committee on Atomic Energy, the United States modify its long-standing policy of not cooperating with other countries in the uranium isotope enrichment field. Specifically, we recommend that at the appropriate time and in accordance with the negotiating strategy recommended in the attached paper, the Department of State and the AEC initiate exploratory talks with certain West European allies and the Commission of the European Communities on the possibility of the United States' assisting the Europeans to construct a multinationally owned and operated gaseous diffusion plant that would be located in Western Europe.

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II. Summary:A. The Proposal

The proposal for cooperation which we recommend can be summarized as follows: Beginning in early 1970, the US would explore the possibility of cooperating with the Commission of the European Communities, the six community countries and the United Kingdom in building a multinational diffusion plant in Western Europe. The US would agree, under mutually acceptable conditions, to make available comprehensive, up-to-date diffusion technology, on a classified basis and subject to agreement on matters pertaining to plant and personnel security. The plant and its product would be subject to mutually acceptable safeguards. Including France in the project presents certain problems because the French have not signed the LTBT or the NPT, but we believe these problems could be dealt with by subjecting the plant and its products to safeguards that would conform with the NPT. The US would be compensated for the use of its technology and would seek agreement on a time schedule leading to plant operation toward the end of the 1970's. We would be prepared, if requested, to discuss the possibility of similar cooperation with other friendly countries, including Australia, Canada and Japan. No information on US gas centrifuge technology, as distinguished from gaseous diffusion technology, would be transferred in the process.

The advantages and disadvantages of this proposal, including alternative courses of action, are discussed in detail in the attached paper. The principal factors that have influenced our recommendation are summarized below.

B. Determination of Foreign Countries to Build Their Own Capacity

1. During the next two decades there will be a substantial growth in the use of nuclear power and enriched uranium throughout the world.

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2. A number of countries, particularly in Western Europe, are determined to acquire independent enrichment capabilities.

3. Great emphasis is being placed abroad on developing the gas centrifuge process of enriching uranium, which is a serious cause of concern from a proliferation standpoint. The centrifuge is particularly susceptible for use in clandestine operations because the plant can be small and can have relatively low requirements for electricity, as contrasted with gaseous diffusion technology. The UK, the Netherlands and Germany are in the final stages of developing a tripartite centrifuge project aimed at achieving a modest production capability in the mid-1970's.

C. Possibility of Influencing Developments Abroad

Through a policy of cooperation we might influence developments abroad to serve US economic, political and nonproliferation interests.

1. We could provide our allies with an attractive alternative to committing the lion's share of their investment resources to rapid development of the centrifuge process. Our proposed plan for cooperation would not seek to obstruct the tripartite project because we recognize its political importance and view a multinational centrifuge project as preferable to several independent national efforts. Nevertheless, we believe it would be mutually beneficial to offer the Europeans an additional option for satisfying their enrichment ambitions. (See Annex A, for estimated cost data on a European diffusion plant.)

2. We might induce other countries to delay their production plans for several years (until the late 1970's) so that US production capacity would be fully utilized before other

large scale new production comes on line. We also should coordinate our enrichment plans with the Europeans and others to reduce the prospect that new enrichment capacity will be under-utilized to a significant degree.

3. We have had repeated indications that Europeans and others would welcome our cooperation in the gaseous diffusion field. Moreover, the European Commission (EURATOM) has recommended that the Community explore both the diffusion and centrifuge processes before making major investment decisions. Our proposal would be responsive to these desires. There also is evidence that the program we are proposing could improve the prospect of US reactor sales to Western Europe, particularly in France. We also recognize that there might be some adverse reactions to our proposal abroad. We believe these can be minimized, perhaps eliminated, by adopting an appropriate negotiating strategy.

4. The program of cooperation could strengthen the Commission of the European Communities and as a consequence, our efforts in support of European integration.

5. An early and comprehensive offer of U.S. assistance in the diffusion field could have a beneficial effect in inducing certain key countries (such as Germany) to ratify the NPT, because it would represent a significant liberalization in US foreign nuclear policy, and would add credibility to past US expressions of willingness to help parties to the NPT in the field of peaceful uses. (On the other hand, since we expect to cooperate with only a limited number of countries that are able to meet our conditions, our proposal would not enhance NPT acceptance in countries not benefiting from US assistance and could prove to be especially troublesome in the case of Japan should it not be possible due to legal considerations for us to satisfy in some way Japan's aspirations in the enrichment field.)

6. We believe our proposal would provide the US with a number of other political and economic benefits. We are anxious to assure that foreign enrichment programs are effectively safeguarded and that the plants and products are used only for peaceful programs. We believe the US might gain a greater voice in these matters through constructive association with foreign enrichment plants than by continued non-participation. Moreover, we would plan to obtain significant revenues from our technology as well as a meaningful, continuing voice both in the management of the plant and its export policies.

D. Related Issues

We have also considered the following related issues which merit special attention:

1. Whether Our Cooperation Should be Limited To States That Sign the NPT

We believe US cooperation preferably should be extended to those interested states in Western Europe that have signed the NPT. We would not imply that ratification of the NPT is a sine qua non for our cooperation, but we would express the view to our prospective partners that our ability to complete and execute cooperative arrangements would be greatly facilitated if they signed and ratified the Treaty.

France, which will probably not sign the Treaty, would not be excluded for reasons discussed in detail in the attached paper.

2. Implications for our Relations with Other Countries

While the immediate proposal relates to cooperation in the gaseous diffusion field with Western European allies, it must be recognized that, if this is undertaken, cooperation with other friendly countries such as Canada, Australia and Japan would be difficult to refuse if they could meet our general conditions. While any such cooperative projects would have to be

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considered case by case on their merits, we would expect the following conditions to apply inter alia:

(a) Our assistance would be furnished on a classified basis; (b) We would consider associating ourselves only with well conceived projects of serious intent where the prospects of adequate financing are high and where the return to the United States in terms of revenues and influence appeared to warrant the provision of US technology; (c) We would give preference to multilaterally controlled and owned ventures; and (d) We would insist that the enrichment plant and its products be subject to safeguards in conformity with the NPT. Furthermore, since our cooperation would take place pursuant to one or more civil agreements, we would seek a guarantee that the plant and its product would be used only for peaceful purposes. Moreover, any US restricted data would be furnished only to authorized personnel, under strict security control, and on a need to know basis for use in the cooperative project.

### 3. The Implications of the Foregoing Proposal on the Disposition of the AEC Gaseous Diffusion Facilities

The Administration has decided that there should be no disposal of AEC diffusion plants for the time being, but that transfer to private industry is the ultimate objective. The benefits to the US of the cooperative program outlined above are independent of whether US enrichment facilities are publicly or privately owned. In the event of private ownership, the operators of the US facilities could have a direct role in the implementation of the cooperative program.

### 4. Negotiating Strategy

A proposed negotiating strategy forms an integral part of our recommendations and is spelled out in Part V of the paper. However, both the timing and manner of exploratory conversations with the Europeans and consultations with other countries would be subject to continuous review by the AEC and the Department of

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State.

Chairman,  
The Under Secretaries Committee



Elliot L. Richardson  
Under Secretary of State

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A Program for International Cooperation in  
the Gaseous Diffusion Field

I. Background and Discussion

A. Present U.S. Policy

It is United States' policy to classify information on isotope enrichment technology, and to withhold it from other countries, on the premise that the threat of nuclear weapons proliferation increases as the number of enriching facilities throughout the world increases. (In the post World War II period, the only exception to this policy was a limited exchange on the centrifuge process with the United Kingdom between 1960 and 1965.) We have sought to reduce incentives to develop enriching facilities abroad by supplying U-235, under stable and attractive conditions, to countries that accept bilateral or multilateral safeguards.

This approach has delayed the construction of foreign enrichment facilities: outside of the Communist Bloc, only France and the United Kingdom have enrichment plants of modest production scale. It has also resulted in political and economic advantages for the United States; including significant returns in foreign revenues.

B. Need for a New Policy

Several factors suggest that a change in policy is now warranted.

1. During recent years, several industrially advanced countries have been rapidly shifting to the use of nuclear power for generating electricity. This trend is expected to accelerate in the future. It has been estimated that by the year 1980 approximately 320,000 megawatts of nuclear power will be installed throughout the world. This would constitute roughly 13% percent of a total installed capacity of 2,400,000 megawatts.

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Enriched uranium is the preferred fuel for the nuclear reactors used to generate electricity and the only fuel for commercial reactors of US design, which enjoy predominant market acceptance in many nations of the world.

The projected demand, both domestic and foreign, for enriched uranium can be met by existing and planned US capacity until the late 1970's. However, by that time additional new capacity will have to come on line.

2. Because of the growing use of enriched uranium reactors, several foreign countries are seriously concerned about their total dependence on the US for this nuclear fuel. Despite attractive US fuel supply policies, they are worried about the certainty of future supplies and about the possibility, however remote, that the US might use its monopoly position at some time to achieve political or economic objectives to which they may not subscribe. Several countries are also strongly attracted by the commercial possibilities of an enrichment plant, both as source of fuel and as a step towards the export of fuel and reactors. It is nearly certain that some new foreign enrichment capacity will be built in Europe and possibly in Japan and Australia, even if the costs of the product exceed US enrichment prices. (Some countries believe they ultimately might meet or better the current US price of \$26 per kilogram of separative work.)

The British, Dutch and Germans have reached agreement on a tripartite project to establish a modest production capability in Western Europe by the mid-1970's based on the gas centrifuge process.\* The Commission of the European Communities has proposed that the EURATOM member states undertake pilot projects on both the gaseous diffusion and the gas centrifuge processes, so that they

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\* By the mid 1970's, the centrifuge plant at Capenhurst is expected to reach a capacity of 200 tons sw/year and the one at Almelo in the Netherlands 100-150 tons sw/year. About 100 tons of the ultimate output of the two plants is expected to be available by the year 1972. This compares with the US diffusion plant capacity of 17,000 tons sw/year.

can make a major investment decision on a large scale enrichment plant by the mid-1970's. Outside of Europe, Australia and Japan have serious R&D programs under way, primarily in the centrifuge field, and Canada has expressed a strong interest in building a gaseous diffusion enrichment plant in its northwest provinces. (A survey of current foreign programs and plans is included in Annex B.)

3. We have a strong incentive to rationalize our own enrichment plans with those of the Western Europeans with the view of assuring that our enrichment capacity is fully utilized before a major European plant comes into operation. (It would take the Europeans approximately six years to construct a major gaseous diffusion or gas centrifuge plant from the time of a firm decision.) This would suggest a European target of the late 1970's, since currently planned US capacity will be sufficient to meet all domestic and foreign needs until that date. If a major European plant comes into operation as little as two or three years prior to that date, the US could suffer a significant loss of revenues.\* However, after the late 1970's further increases in our domestic demand should serve to offset any losses we might suffer in the foreign market. The Europeans should have an interest in coordinating their plans with ours since we both wish to avoid any over-commitments and the cheapest incremental enrichment capacity in the world between now and the late 1970's can be achieved through currently planned improvements in the USAEC's gaseous diffusion capacity.

4. From the standpoint of proliferation, the development of the centrifuge process is a cause of serious concern. Unlike the massive diffusion plants which require enormous inputs of electricity and large building complexes, the centrifuge process lends itself to clandestine operation. Small cascades could be installed in small buildings or warehouses and could be operated to produce significant amounts of weapons-grade uranium without use of a heavy load of electricity to signal their existence.

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\* Our estimated annual sales of enrichment services under current price and technical conditions to West European nations (France and the UK excluded) in millions of dollars, follows: CY 1976-\$117; CY 1977-\$148; CY 1978-\$176; CY 1979-\$197; CY 1980-\$234; TOTAL \$872.

Gaseous diffusion plants, in contrast, can be designed to produce only low enriched material that would be unsuitable for use in nuclear weapons.

For these and other reasons, the United States has strictly limited the dissemination of information on advances in centrifuge technology. We have a formal agreement with the UK and informal agreements with the Dutch and the Germans to limit access to centrifuge information according to a common classification guide prepared by the USAEC. These agreements do not preclude technical cooperation among the parties, so long as the common guidelines are respected.

The United States has not opposed the German, Dutch and British efforts at tripartite cooperation in this field because we have felt that a multi-national project, with a built-in "adversary" element of control is preferable to three independent national developments which would otherwise be likely to emerge. Moreover, we have recognized the political importance of the project to our allies and have been sympathetic to the British interest in forging closer ties to the Continent. The three governments have indicated that their project agreement will include assurances against non-proliferation, including adequate safeguards on the plants and the U-235 they will produce.

We remain concerned, however, about the possible proliferation of such facilities around the world, especially if centrifuge machines and/or centrifuge technology were to be exported on an unrestricted commercial basis to non-nuclear-weapons states.

We are not under any illusion that access to U.S. diffusion technology by itself would prevent any country with a strong military, political or commercial motive from developing centrifuge enrichment facilities if they decide to and are capable of doing so. However, the main thrust of resource investment, especially in industrially advanced countries, might well be diverted to gaseous diffusion technology by a genuine U.S. offer to cooperate.

5. A policy of U.S. cooperation in the diffusion field might improve the prospects for U.S. reactor sales in Western Europe, particularly France. It would also provide the U.S. with a number of other political and economic benefits including a greater voice in safeguards on a foreign plant and its product, significant revenues for our technology, and a continuing voice in management and export policies.

6. The Non-Proliferation Treaty has led several signatory, or potential signatory, nations to indicate that their willingness to relinquish the right of acquiring nuclear weapons should remove the basic reason for excluding them from access to uranium enrichment technology. They also believe that such access would be a reasonable concession for the nuclear weapons states to make.

Non-nuclear weapons countries that adhere to the NPT will commit themselves to accept international safeguards on their peaceful nuclear activities. The Treaty, however, imposes no constraints against building uranium enrichment plants, provided the required safeguards are applied to such plants and their products.

An offer of U.S. assistance in the diffusion field might favorably influence certain key countries (such as Germany) in deciding on NPT ratification, because it would represent a significant liberalization in U.S. foreign nuclear policy, and would add credibility to past U.S. expressions of willingness to help parties to the NPT in the field of peaceful uses.

## II. U.S. Policy Options - Cooperation in the Gaseous Diffusion Field Alone

The U.S. appears to have two basic policy options; (a) cooperation with the Europeans and perhaps others in the gaseous diffusion field alone, or in both the diffusion and gas centrifuge fields; or (b) continuation of our present policy of non-cooperation.

### A. Cooperation in the Diffusion Field

This approach would have the following features:

1. Countries included in the initial offer. The United States would undertake informal, exploratory talks with the member states of EURATOM (France, West Germany,

Italy, the Netherlands, Belgium and Luxembourg), the United Kingdom and the Commission of the European Communities, aimed at the construction of a multinational gaseous diffusion plant in Western Europe that would come into operation in the late 1970's.

Our initial proposal would include these allied nations because they are the most advanced in the enrichment field and are the most determined to establish independent facilities. Other Western European countries might be included subsequently.

Because it appears that France will not be a party to the Limited Test Ban Treaty and the NPT, and because France is a nuclear weapons power, including France in a cooperative project presents special problems. We expect that the guarantees and protections referred to on page 5 of the summary would be effective. They would include a limitation providing that US restricted data could be used only on the cooperative project. (Moreover, France already has in our opinion sufficient enrichment capacity to satisfy the requirements of its weapons program.) Notwithstanding this fact, however, it must be recognized that the French diffusion plant at Pierrelatte might benefit indirectly from French access to US diffusion technology should French participants in the cooperative project pass on information about the US technology involved to Pierrelatte. To the extent that there is risk that this might occur, it is possible that US participation in the cooperative project could give rise to an exception to NSAM 294. NSAM 294 (attached at Annex C) is directed against US assistance in the development of a French nuclear weapons capability. (The policy set forth in NSAM 294 is currently under review under the terms of NSSM 71 of August 14, 1969.)

Furthermore, the US has provided enriched uranium to France (through EURATOM) for use in French civil nuclear programs. We believe including France in the cooperative project is essential to its success because if France were excluded, EURATOM would probably have to be ruled out as a participant as well. (Some high level French officials have indicated informally that US cooperation with a European gaseous diffusion plant would be welcome.)

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2. US Contributions. We would expect our cooperation and the plant operations to take place on a classified basis in accordance with mutually agreed classification standards. The precise degree of technical assistance the US would provide the project, as well as the compensation it would receive, would be subject to negotiation. We anticipate, however, that when the exchange was implemented, the US would furnish its partners comprehensive, up-to-date information on its gaseous diffusion process and technical advice and assistance in design, construction and operation of the plant.

One particularly sensitive item is barrier manufacturing technology. We recognize that the Europeans will wish to acquire their own barrier manufacturing capability, either initially or for later barrier replacements and plant expansion. Any cooperative venture which does not result in a truly independent European capability, that is, facilities which can be operated, maintained, and, if necessary, expanded without further US involvement, would not meet European objectives and would be unacceptable. In considering this matter, it must be recognized that the Europeans are unlikely to undertake a major financial commitment to build a gaseous diffusion plant (which would entail some reorientation away from the centrifuge) unless they were assured of the provision of comprehensive US technology, which is the most advanced in the world. Access to US barriers would be of great assistance to technically competent people who were trying to develop an independent capability. Accordingly, we would not rule out the possibility of providing the Europeans barrier manufacturing data if it appeared to be an important element in the negotiations and if we were assured of an equitable return. One method would be to offer to provide the Europeans US manufactured barriers for the first plant and transfer barrier manufacturing technology at a later date.

3. Quid Pro Quo. In return for its assistance, the U.S. would inter alia, expect to receive financial compensation for the information it provides and a continuing voice in the project's management and control, including export policies. We would expect that the plant and its products would be subject to safeguards arrangements and physical and personnel security policies mutually satisfactory to the parties concerned. Finally, we would seek

to reach agreement on a time schedule which would lead to full plant operation when the present and projected U.S. capacity is no longer adequate to meet both domestic and and foreign demand for enriched uranium.

4. Timing. Cooperation would be carried out in several phases. During the first phase we would assess with our prospective partners the attractiveness of diffusion technology in the European context, the optimum plant size, its location and other planning requirements. In the second phase, perhaps beginning in late 1972, we would provide detailed US design data. (European agreement to go ahead on this basis undoubtedly would depend on an early, firm US commitment on the general scope and degree of assistance we would provide at a later date.) The final phase, construction and operation of the plant, would occur in the late 1970's.

5. Cooperation with Additional Countries. Without taking the initiative, the U.S. would be prepared to consider entering into similar cooperative efforts with other friendly countries, on a case-by-case basis, if they could meet our basic general conditions. These would include conducting the cooperation on a classified basis, evidence that the project was well conceived and likely to achieve adequate financial support, an adequate return for the provision of U.S. technology, and assurance that the plant and its products would be under adequate safeguards. Preference would be given to projects organized on a multi-lateral basis. If Australia, Canada and Japan could meet these requirements, we would consider partnership with them. Japan, however, might have difficulty meeting these conditions because of its legal inhibitions against classifying atomic energy information. This could present us with a serious problem since next to Europe, Japan is likely to have the most legitimate interest in its own enrichment plant.

As a practical matter, the number of cooperative arrangements with other countries would be very limited because of the sizeable investment required for gaseous diffusion plants.

B. Advantages. The principal arguments favoring this approach may be summarized as follows:

1. It would provide the Europeans and others with an attractive alternative to exclusive development of the gas centrifuge process;
2. It would assure that these efforts are undertaken on a classified basis and under adequate safeguards;
3. It would encourage the Europeans and others to construct their plants on a time scale that would assure maximum use of existing U.S. capacity;
4. It would enable the U.S. to obtain reasonable compensation for the use of U.S. technology and a U.S. voice in the continuing management of the project, including its export policies. This would preserve important economic benefits for the use of our technology, which could otherwise be diminished or lost through the construction of an independent foreign enrichment capacity;
5. It would help us create a more favorable climate for the sale of U.S. reactors and equipment abroad;
6. It could serve to strengthen EURATOM as an institution which in turn could strengthen the overall movement towards greater European unity.

C. Disadvantages

1. It might be regarded by some of the European nations involved as interference with their efforts to achieve a degree of independence from the U.S. in the enrichment field.
2. The Europeans might find it preferable, given their interest in the gas centrifuge, if we evidenced a willingness to cooperate in both the gaseous diffusion and gas centrifuge fields. Since we are not prepared to be forthcoming in meeting such a request, the tripartite countries might regard our offer as a ploy to delay and perhaps subvert their decision to proceed in the development of the centrifuge process. There also might be

suspicious that we are holding back cooperation in the gas centrifuge field because we have achieved an important technological breakthrough.

3. There would be an additional risk that U.S. gaseous diffusion technology might fall in the hands of countries that might wish to use it for military purposes. This would be true even if our cooperation were handled on a classified basis.

4. The Europeans conceivably might not be successful in their efforts to construct a viable and economically competitive enrichment plant without our support. Hence our assistance might serve to accelerate their ability to displace our enrichment services in the European market.

5. Although many countries would benefit from the existence of more than one source of enriched uranium, we expect to cooperate with only a limited number of countries that are able to meet our conditions. Our proposal would not enhance NPT acceptance in countries not benefiting from US assistance, and as noted it could prove to be especially troublesome in the case of Japan.

#### D. Anticipated Foreign Reactions

Whether the possible advantages of this alternative outweigh the possible disadvantages is related in large part to the reaction that might be expected from other countries.

1. The Commission of the European Communities. The EC Commission has implied that it would welcome a US proposal to cooperate in the diffusion field. It would mesh neatly with the Commission's own proposal to bring large scale enrichment facilities into operation towards the end of the next decade.

2. France. France has proposed at the Hague Summit that a European isotope separation plant be established. France would probably be attracted by the US proposal because its experience and investment in diffusion technology would give it a place of leadership in the co-

operative project. On the other hand the French may resent our proposal if they still hope their own diffusion technology should provide the basis for European cooperation.

3. The Tripartite Countries. The Dutch, German and British reactions are likely to be mixed since they may view it as hostile to their own plans to pursue the gas centrifuge and they may be hesitant to get involved in an additional European enrichment venture. Moreover, these three countries, especially the Netherlands, are unlikely to abandon their currently planned efforts in the centrifuge field. On the other hand, given the developmental state of their gas centrifuge technology they might on reflection welcome the more proven option that we would propose in deciding on the nature of the large scale enrichment capacity that Europe should construct. We know, for example, that a number of German interests would favor this type of cooperation with the US. Since our offer of cooperation would include these three countries, we would serve to minimize an impression that we are taking an initiative solely hostile to their tripartite centrifuge efforts.

Also, the British might be uneasy about any proposal that would embroil their bid to enter the Community in an overt intra-Community debate about how to proceed in the enrichment field. However, if the tripartite project becomes a divisive element in the UK accession debate, the UK and some EC countries might use a well-timed US proposal as a means of reaching a compromise solution to the enrichment question.

4. Belgium and Italy. Both Belgium and Italy have evidenced a keen interest in discussing possible participation with the tripartite project and have already had informal conversations with the three countries. The Belgians and Italians would probably favor the US option as another means of getting into the enrichment business with their Common Market partners on a more equal footing.

5. Japan and Australia. These countries can be expected to want to benefit from any change in US policy and would surely insist on treatment comparable to their European competitors. Moreover it is basic US Government policy to treat Japan and Australia whenever possible on

an equal footing with our NATO allies. The possibility of the uncontrolled dissemination of US classified data through cooperation with Japan must be taken into account, however, because of Japan's legal prohibition against national security classification.

6. Canada. We are exploring with Canada the possibility of moving towards a common energy policy with respect to oil, natural gas, coal, electricity and uranium. We already have extremely close ties with Canada in the nuclear field.

Canada has expressed interest in cooperating with the United States in constructing a diffusion plant. Given this interest, our close economic and political ties with Canada, and the importance of uranium to the Canadian economy, failure to make some provisions for Canada in any scheme for cooperation in the enrichment field would be greatly resented in Canada and could be detrimental to US-Canadian relations.

7. The USSR. Soviet propaganda has reflected displeasure towards the tripartite centrifuge project. The USSR might react similarly to any US proposal to cooperate in the enrichment field which includes the FRG.

In reality, however, the Soviets are likely to feel easier about a German project in which we exert influence than in an independent one. They are also not likely to have a basis for serious concern since our proposal is aimed at deferring construction of a major foreign enrichment capacity and providing the Europeans with an alternative to exclusive development of the centrifuge process. In any case, we should not let the prospect of continued Soviet attacks against the FRG deter US cooperation in the enrichment field.

8. European Countries Not Included and the LDC's. The reactions of European countries not included in an initial US proposal to cooperate and of most less developed countries would probably not be hostile, or present insurmountable obstacles to implementing this plan for cooperation. The financial and technological investment in a diffusion plant is so great that only the most industrially advanced countries could seriously consider

participation with the United States in this field. Moreover, other countries might see a more diversified source of supply as in their interest. It should also be noted that the NPT strongly encourages parties to cooperate with other nations in the peaceful nuclear field but allows them the discretion of determining whether or not it is in their interest to do so.

### III. US Policy Options - Cooperation in Both the Gaseous Diffusion and Gas Centrifuge Fields

The US could offer (under terms comparable to those outlined above) to cooperate with the West Europeans and others in both the diffusion and centrifuge fields instead of in the diffusion field alone. Under this option we would provide our partners with a comprehensive, current picture of where US technology stands in both fields, and we would then consider actively assisting the Europeans in the process or processes they deemed most suitable. This might include extensive cooperation in either field or in both, depending on the foreign programs that develop.

#### A. Advantages

This approach would have the following advantages:

1. It would be more flexible and would permit cooperation with the Europeans in the technology of their choice, which they would be able to make in full knowledge of where the U.S. technology stands in both fields. (Countries with high power costs and uncertain demands for U-235 may prefer the centrifuge process because of its lower electricity requirements and because it can be constructed in modest plant increments.)

2. Some of the arguments favoring U.S. participation in a diffusion plant appear to apply equally to participation in a centrifuge effort. For example, since we probably enjoy a technological lead over the Europeans in the centrifuge field, we might be able to obtain adequate financial returns for a US contribution. Moreover, since the centrifuge process presents greater proliferation risks than diffusion, it could be argued that it would be all the more important for the U.S., through cooperation, to exert a significant control over foreign developments in this field.

## B. Disadvantages

1. The central and very serious disadvantage of this alternative is that the U.S. would directly contribute to the dissemination of centrifuge technology and perhaps hasten its application, with the attendant increased risk of proliferation.

2. One of the major objectives of a U.S. initiative at this time would be to offer foreign countries an alternative to the development of centrifuge technology in the hope that they might make their major investments in the diffusion field.

## C. Comment

In the event the U.S. offer to cooperate in the diffusion field alone were rejected and the Europeans appeared intent on proceeding with a major gas centrifuge production plant, we would always have the opportunity of reviewing our various options. But, at this time, we recommend that no information on U.S. centrifuge technology, including cost data, be transferred to any other country or organization.

## IV. U.S. Policy Options-Maintain Our Present Policies

The arguments for and against this approach are as follows:

### A. Advantages

1. It is still possible that the Europeans and others will not be able to muster the resources to build a large enrichment plant. Even with the necessary political will and financial investment, it may take them several years to realize their ambitions. Given this uncertainty, it might be in our interests not to cooperate but to compete aggressively for the foreign market for enrichment services.

2. As already noted, any program of US cooperation, even if conducted on a classified basis, would add to the risk that US information might fall into the hands of nations desiring to use it for military purposes.

3. Unless we were prepared to cooperate with everyone (which is not proposed) we might encounter adverse reactions from those nations not included in our offer.

4. Cooperation in the development of foreign enriching capabilities might complicate the transfer of AEC diffusion plants to private industry that the President has defined as an ultimate goal. However, the attractiveness of these plants for private investment may not, in any event, depend heavily on the potential foreign market for enriched uranium because of the probability that other nations will develop an independent capability with or without US help.

#### B. Disadvantages

1. The foregoing arguments ignore the basic fact that several countries are firmly resolved to acquire some independent enrichment capability with or without US assistance. Moreover, there is every reason to expect they will be successful even if they have to pay a substantial premium in the process.

2. The knowledge required to produce plutonium is unclassified and is widespread and there are large quantities of plutonium throughout the world with more being created daily. Maintaining a restrictive policy in regard to our diffusion process would therefore not preclude any industrialized country seriously determined to do so, from producing a nuclear bomb.

3. The period of U.S. monopoly in the uranium enrichment field is rapidly drawing to a close. For the U.S. to remain aloof from foreign developments in this field will not turn back the technological clock, nor will it decrease for any meaningful period of time the risks of further weapons proliferation inherent in the continuing peaceful exploitation of the atom. Rather, it might result only in the forfeiture of an opportunity to use our present technological superiority in an effort to gain important economic and security benefits for the United States.

Whether the U.S. could actually gain a degree of control over the security arrangements of a cooperative venture that would justify releasing classified information to

a group of foreign partners, and whether other countries can be induced to invest in a diffusion plant rather than continuing to concentrate their investment exclusively in the centrifuge field, are questions that can only be answered through serious negotiations with the countries concerned.

## V. Conclusion

A. After considering the foregoing three alternatives, we conclude that the first, namely, cooperation in the gaseous diffusion field would be preferable. This conclusion, however, is based on approval of the following negotiating strategy.

### B. Negotiating Strategy

#### 1. Timing

Subject to continuous review by the Department of State and the AEC, preliminary talks would begin in the early spring of 1970. By that time the Dutch, British and Germans will have a better idea of whether or how the tripartite centrifuge project may be expanded to include other countries. The effect of the project on the Community's enrichment plans and the effect that a US proposal might have on UK accession negotiations with the Community also should be clearer. Moreover, by the early months of 1970 the new German government will be in a better position to respond to a U.S. initiative, and Japan will probably have signed the NPT. Given the importance that the tripartite project has to the United Kingdom's accession interests, we would approach the United Kingdom before we approached our other prospective partners. We would, after preliminary discussions with the British, begin any initial consultations with the Commission of the European Communities.

Concurrently with our initial exploratory talks with the Europeans, the AEC will develop guidelines for possible royalties or similiar payments for use, after appropriate coordination within the Executive Branch, should a negotiating phase follow the exploratory phase.

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## 2. Approach

We should indicate in initial contacts that U.S. cooperation in the diffusion field is not conditioned upon European abandonment of research and development of the centrifuge process. We would stress that we believe cooperation in the diffusion field could be mutually advantageous and that it is worth serious study by the Europeans as one option they may want to consider in deciding upon an enrichment program.

The Europeans can be expected to inquire whether it is possible that future U.S. enrichment plants might involve the gas centrifuge and whether it would make sense for Europe to embark on a gaseous diffusion program if such a possibility exists. They may also ask whether the U.S. would be prepared to cooperate with them in centrifuge development either additionally or in place of the diffusion process. Should such questions arise, we would indicate that the USAEC has no current intention of bringing the centrifuge into commercial application in the U.S. prior to the late 1970's, that the USAEC's centrifuge program is developmental in nature, and that we are reluctant to cooperate with any countries in this field given the sensitivity of the technology. Moreover, we would stress that the diffusion process is the one most perfected technologically and that our offer represents the product of a major investment and of 25 years' experience. Further, we would point out that a U.S. option could be supplementary to European enrichment studies in the centrifuge field already under way and would in no way deprive them of the opportunity to assess the relative advantages of both techniques. We believe these are convincing arguments. If, however, our offer were rejected because centrifuge information is not included, or if the Europeans elected to pursue only the centrifuge route, we would have to review the situation in the light of these circumstances.

## 3. Other Countries

In the event other countries, particularly Japan, Australia, and Canada, express an interest either in associating themselves with a U.S.-European venture or

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exploring the possibility of some form of bilateral cooperation with the U.S., we would, as noted, indicate a willingness to hold preliminary exploratory conversations with them on how their long-term requirements for enriched uranium might best be met, with the understanding that the pre-conditions to U.S. assistance set forth in this paper would apply (recognizing that our preference for a multilateral arrangement may be unrealistic in the case of Canada).

We would be prepared to counter possible Soviet propaganda directed against the U.S. proposal by citing the constructive controls that would be inherent in a broadly-based, multi-national diffusion project.

If this general strategy were followed, subject, of course, to constant review by the Department of State and the AEC in response to developments abroad, an effort at cooperation along the lines recommended above would appear to be well worth trying. It would give allied countries an additional option to consider in making their enrichment plans. They could at worst reject that option and at best accept it as serving their interest. At the same time, by exploring the possibilities of cooperation the U.S. would in no way be bound to enter into a disadvantageous agreement if the negotiations did not prove fruitful from our point of view.

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ANNEX A

Based on various studies by EURATOM and FORATOM, it is considered most likely that if a diffusion plant were built in Western Europe for the production of enriched uranium, the first such plant would be in operation by about 1980 and would have an annual capacity of about 7,500 metric ton units of separative work (SW). If undertaken as a completely independent European effort, these same studies estimate a plant investment of between \$90 and \$130 per kilogram unit of SW per year; the latter figure is considered to be the most realistic. Thus, the investment -- exclusive of electrical generating and other support facilities -- would be in the order of \$975 million. It should be pointed out that these costs were determined largely by adjustments to the new plant costs shown in various published AEC documents rather than by independent estimates. Thus, we believe that the Europeans -- lacking the US experience and industrial base -- probably have underestimated the unit cost, for the initial plant at least, if it were undertaken exclusively on a European basis. Further, no research and development costs are included in the foregoing estimates. To bring existing European diffusion technology to the present US level, it has been estimated by FORATOM that the expenditure of \$100 to \$140 million would be required, with no assurance that parity would be reached.

Insofar as unit costs of separative work are concerned, by adjusting AEC data to European conditions, the Europeans have estimated that such costs for an independently built European plant would range between \$25 and \$37 per kilogram unit of separative work, with only operating and capital charges; they do not include items equivalent to the "added factor," interest on inventory or return on investment.

With US assistance, it is believed that the unit cost of investment could be reduced to about \$100 per kilogram unit of SW per year, or a total savings for the 7,500 metric ton unit plant of at least \$225 million. Furthermore, the \$100 to \$140 million in research and development expenditure would become unnecessary. If the diffusion plant were built in cooperation with the US, it is felt that the unit cost of separative work could be reduced from the \$33 figure to about \$25 per kilogram unit (based on European capital assumptions and electricity at 5 mills per kilowatt-hour.)

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ANNEX B - Current Foreign Enrichment Programs

1. France

France has a gaseous diffusion plant at Pierrelatte designed to produce enriched uranium for the Force de Frappe. The French have floated the idea on several occasions of developing a multilaterally financed European facility for the production of lightly enriched uranium. The Germans and other West Europeans to whom the proposal was addressed have not reacted enthusiastically. The French appear to be committed to diffusion technology and have publicly questioned the feasibility of the centrifuge process. They have had a modest R & D program underway in the centrifuge field with which, they apparently consider, they have had little success.

2. The United Kingdom, The Netherlands, and the FRG

In 1965 the British Government announced plans to modernize their diffusion plant at Capenhurst, primarily to meet increased civilian demand for nuclear fuel in the early 1970's. On the basis of economic considerations, the British have opted to expand their facilities beyond the modernization of Capenhurst through the development of the centrifuge process. Both the Germans and the Dutch have R & D programs in the centrifuge field. They have reached agreement with the British to pool their technology and resources in a tripartite project. In joining together they are motivated by political as well as economic considerations. The British particularly favor the project as a means of strengthening their ties to the Continent and as potentially helpful in eventual negotiations to enter the Common Market.

While France has remained aloof from the tripartite Project, both Italy and Belgium have indicated a strong interest in participating. The tripartite countries have agreed to consult with the Belgians and Italians and there have already been preliminary talks among the five countries.

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3. European Communities

The Commission of the European Communities has been interested for some time in a Community enrichment facility and is undoubtedly concerned by the tripartite development which threatens to read them out of European cooperation in this field. The Commission has recently proposed to the Council a three stage program to permit the Community to achieve a degree of self-sufficiency in the production of enriched uranium during the next decade. The program would include detailed studies and pilot projects on both the diffusion and the centrifuge processes drawing on French as well as German and Dutch experience in the enrichment field. It would attempt to begin production by the preferred process or combination of processes in the late 1970's.

4. Italy

Italy announced in November of this year that an Italian industrial firm has produced two prototype centrifuges. The Italian government has supported modest industrial research in the centrifuge since the beginning of 1969. It is not clear whether the centrifuge prototypes have actually been tested. There is reason to suspect that the Italian announcement was timed to fortify the Italian bid for membership in the tripartite centrifuge project.

5. Japan

Outside of Europe, Japan is engaged in serious research on diffusion and centrifuge technology with lesser efforts in other processes. While Japanese efforts appear to be favoring work in the centrifuge field, the Japanese Atomic Energy Agency has set 1975 as the target year for selection of a single process to be the basis of further efforts. The Japanese could probably accelerate this time table, however, if they felt that construction of a European enrichment facility posed a serious threat to their ability to compete in this field in the future.

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6. Australia

Australia started research on a gas centrifuge development program in 1960-61. In 1968 an official of the Australian Atomic Energy Commission told US officials that, based on their research, they believe a small, economically feasible system might be developed in four years time. The Australian program is aimed at achieving self-sufficiency in the production of nuclear fuel for their power reactor program and at the export market. They have evidenced a strong interest in cooperating with the US in this field.

7. Canada

Canada does not have an important R & D program underway in the enrichment field. They have, however, expressed an interest in cooperating with the United States in constructing a diffusion plant in the far Northwestern areas of Canada, where large supplies of natural uranium exist along with a large source of low cost hydro-electric power which would have no other marketing value.

8. Other Countries

In addition to the countries mentioned above, Sweden, Brazil, Israel, Yugoslavia, Egypt, India, Argentina and several others have evidenced varying degrees of interest in centrifuge research.

9. United States

It should be borne in mind that the United States is actively engaged in centrifuge research and is probably technically far ahead of any of the countries similarly engaged abroad.

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ANNEX C

NSA - 294

CONFIDENTIAL

7-6  
N  
294

April 20, 1964

~~SECRET~~

NATIONAL SECURITY ACTION MEMORANDUM 294

TO: The Secretary of State.  
The Secretary of Defense  
The Secretary of Commerce  
The Director of Central Intelligence  
The Administrator, National Aeronautics and  
Space Administration  
The Chairman, Atomic Energy Commission  
The Director, Office of Science and Technology

SUBJECT: U.S. Nuclear and Strategic Delivery System  
Assistance to France

It is the policy of this government to oppose the development of nuclear forces by additional states, other than those whose forces would be assigned as part of a NATO nuclear force, targeted in accordance with NATO plans and, except when supreme national interests were at stake, used only for the defense purposes of the Alliance.

Given current French policy, it continues to be in this government's interest not to contribute to or assist in the development of a French nuclear warhead capability or a French national strategic nuclear delivery capacity. This includes exchanges of information and technology between the governments, sale of equipment, joint research and development activities, and exchanges between industrial and commercial organizations, either directly or through third parties, which would be reasonably likely to facilitate these efforts by significantly affecting timing, quality or costs or would identify the U.S. as a major supplier or collaborator. However, this directive is not intended to restrict unduly full and useful cooperation in non-strategic programs and activities.

~~TOP SECRET~~

Therefore, the President has directed that effective controls be established immediately to assure that, to the extent feasible, the assistance referred to above is not extended either intentionally or unintentionally.

To this end, specific technical guidance is to be developed and issued at the earliest possible time for the use of the agencies that control the export of equipment and technology, including data exchange arrangements. Responsibility for the development of such guidance, and when necessary the revision of these guidances, will be vested in the Departments of State and Defense, in consultation as appropriate with the Department of Commerce, the Central Intelligence Agency, the National Aeronautics and Space Administration, the Atomic Energy Commission, and the Office of Science and Technology, and under the leadership of the Department of State. The approved guidance documents will be cleared at the White House and issued as technical appendices to this National Security Action Memorandum. Necessary guidance will be requested before specific commitments are made by any agency.

*McGeorge Bundy*  
McGeorge Bundy

~~TOP SECRET~~

THE WHITE HOUSE  
WASHINGTON

9/15/34  
F. C.  
NSAM  
294

March 9, 1965

Dear Tommy:

I have held your letter of February 26 about NSAM 294 until we could have a first meeting with the two Secretaries on the Gilpatric Report. In the light of our discussion of yesterday, I now think we should clearly go ahead on the basis which is suggested in the memorandum enclosed with your letter. My one additional suggestion is that I hope a White House Staff Officer may also be included in the NSAM Review Group under State chairmanship. I would expect to nominate Spurgeon Keeny for this job.

Sincerely,

*mc*

McGeorge Bundy

The Honorable Llewellyn Thompson  
Acting Deputy Under Secretary  
Department of State

C O P Y

SECRET

February 26, 1965

Dear Mac:

You will recall that we had set up a small working group to look into some of the coordination and implementation aspects of NSAM 294. I enclose a preliminary report of the group.

Their findings and views as to continued application of the policy set forth in the NSAM seem to me to square with the consensus reached in the White House meeting of December 30 as recorded in the January 14 memorandum sent to participants in the meeting. We all recognize that we are feeling our way in a singularly complex area, and the approach suggested by the working group is in my view a sound one.

I believe we should proceed along these lines, and plan to ask the other agencies concerned to designate representatives to the Review Group proposed. In the Department of State, general NSAM 294 responsibility will continue to rest with the Deputy Assistant Secretary for Politico-Military Affairs, Mr. Jeffrey C. Kitchen, and he or an officer designated by him will represent the Department on the Review Group.

Sincerely,

Clearances:

Llewellyn E. Thompson  
Acting

G/PM - Mr. Kitchen  
Mr. Meyers

Enclosure:

Report of Working Group.

The Honorable  
McGeorge Bundy,  
Special Assistant to the President  
The White House.

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CONCLUSIONS AND RECOMMENDATIONS OF NSAM 294 WORKING GROUP

Conclusions:

1. The purpose of the policy set forth in NSAM 294 is to use export denial, as one means of achieving effective control over material, equipment and technology which any nation\* seeks to acquire for use in an independent nuclear weapons/strategic delivery vehicle program, and which would significantly benefit such program.

2. Adequate legislative authority and export control mechanisms already exist within the U.S. Government to assure that all items of potential concern in NSAM 294 terms come within the cognizance of the appropriate export licensing authorities, either AEC, State, or Commerce.

3. The tasks of the licensing authorities are therefore (1) to make sure that procedures are in effect which are adequate to identify all proposed export items falling under NSAM 294 and (2) to establish the best possible judgment on the following:

- a. The technical, economic, quality, and timing importance of the item to the national weapons program.
- b. The use actually intended for the item.
- c. The alternative sources outside the U.S. for the item or a comparable substitute.

4. Those items

---

\* In practical terms, the U.K. is at present exempted from this policy, since we are cooperating with that country extensively in both the nuclear weapons and delivery vehicle areas. The policy is also not relevant to Bloc countries, since more stringent policies are governing with respect to them.

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- 2 -

4. Those items which are clearly intended for use in a national program, would significantly and directly benefit that program in terms of timing, quality, or cost, and are unavailable in comparable substitute form elsewhere than the U.S. are to be denied.

5. Those items intended for other uses, or of only marginal benefit to the national program, or available elsewhere than the U.S. without undue difficulty or delay, will normally be approved. Other than NSAM 294 considerations may come into play, however (Atomic Energy legislation, Nuclear Test Ban Treaty, political considerations, other U.S. policies, etc.), and individual decisions must take these into account.

6. While NSAM 294 is of general application, France, under her present policies, is the major target country now and for the immediate future. Nevertheless exports to all other countries must be continuously evaluated in terms of both the potential and intention of the recipient country to engage in a national program.

7. No new control mechanisms or formalized inter-agency committees are required, but improved coordination, exchange of views and centralized compilations of case-by-case experience are needed. To the extent feasible, definite lists of commodities and related technologies of importance in NSAM 294 terms should be developed in order to make the controls most effective. The agencies with technical competence in the area are therefore continuing to work on improving present lists. It is recognized, however, that the relative and shifting nature of the NSAM 294 control problem probably means that individual decisions will necessarily continue to be mostly of an ad hoc nature.

Recommendations:

1. Each

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- 3 -

1. Each agency concerned (State, Defense, AEC, Commerce, NASA) should name a single senior staff level representative to have general responsibility within that agency for NSAM 294 matters.

2. These representatives should keep in close touch with each other and with all concerned areas within their own agencies, the purpose being to ensure that NSAM 294 cases arising within or referred through normal channels to their agencies get adequate and expeditious consideration under the criteria outlined above.

3. These representatives should also be constituted as an informal NSAM 294 Review Group, meeting under State chairmanship once a month or as necessary, and including additional participation from their own agencies as desirable. The purpose will be to continue to explore ways and means to improve inter-agency coordination, discuss implementation problems which may have arisen, study decisions reached in individual cases of a precedent value or with unusual features, build up a central body of NSAM 294 experience, and make recommendations for change in policy or procedures to their respective agencies as may be required.

4. The intelligence community should be requested to provide the Review Group on a regular basis with evaluations of additional country potential and intention to engage in nuclear weapons programs, to assist the group in achieving the purpose mentioned in paragraph 6 above.

Clearances:

cc:

Commerce - Mr. Tollin  
Defense - Mr. Nichols  
AEC - Mr. O'Donnell  
NASA - Mr. Gorman  
MC - Mr. Sipes  
E/MDC - Mr. McFadden

WE - Mr. Beigel  
L/ EUR - Mr. Trippe  
CIA - Mr. Christesen

G/PM: SGeorge: fm

2/17/65

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DEPARTMENT OF STATE

Washington, D.C. 20520

1007799

NSC UNDER SECRETARIES COMMITTEE

CONFIDENTIAL

March 11, 1970

NSC-U/SM 56A

TO: The Deputy Secretary of Defense  
The Assistant to the President for National  
Security Affairs  
The Director of Central Intelligence  
The Chairman of the Joint Chiefs of Staff  
The Director, United States Information Agency  
The Under Secretary of Commerce  
The Chairman, Atomic Energy Commission  
The Director, US Arms Control and  
Disarmament Agency  
The Science Advisor to the President  
Mr. James R. Schlesinger, Assistant Director,  
Bureau of the Budget

SUBJECT: A Program for International Cooperation in the  
Uranium Enrichment Field

I enclose a revised page one of the Memorandum to the  
President on this subject, transmitted to you under cover  
of U/SM 56.

The new page one now includes a second paragraph in-  
advertently omitted in the original.

Arthur A. Hartman  
Staff Director

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THE UNDER SECRETARY OF STATE  
WASHINGTON

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February 26, 1970

NSC Under Secretaries Committee

MEMORANDUM TO THE PRESIDENT

SUBJECT: A Program for International Cooperation  
in the Uranium Enrichment Field

Summary and Recommendations:

I. Recommendations:

The Under Secretaries Committee recommends that subject to your approval, and following appropriate consultations with the Joint Committee on Atomic Energy, the United States modify its long-standing policy of not cooperating with other countries in the uranium isotope enrichment field. Specifically, we recommend that at the appropriate time and in accordance with the negotiating strategy recommended in the attached paper, the Department of State and the AEC initiate exploratory talks with certain West European allies and the Commission of the European Communities on the possibility of the United States' assisting the Europeans construct a multinationally owned and operated gaseous diffusion plant that would be located in Western Europe.

We would report the results of these talks together with further recommendations to the National Security Council as soon thereafter as possible. Moreover, the actual implementation of any modification of our present policy would be contingent upon the execution of a suitable agreement or agreements for cooperation with the countries involved, which would require Presidential approval and review by the Joint Committee on Atomic Energy in accordance with statutory procedures.

CONFIDENTIAL

8/5/70

Helena —

Part of a pkg, just rec'd from  
Nancy this AM.

Balance of pkg sent you  
on or about Apr. 20!

MEMORANDUM

HAK has seen  
NATIONAL SECURITY COUNCIL

7799  
WISMSG  
INFORMATION CC:AH  
WL

CONFIDENTIAL

March 24, 1970

MEMORANDUM FOR DR. KISSINGER

FROM: Robert M. Behr *RMB*

SUBJECT: Joint Committee on Atomic Energy (JCAE) Request for  
NSC/USC Report on International Cooperation in the  
Enrichment Field

The Joint Committee on Atomic Energy has been advised, presumably by AEC and/or State, of the existence of the report which has been forwarded to the President for decision on cooperation in the uranium enrichment field.

Representative Hosmer informally requested a copy of the report, less the Under Secretary's memorandum and recommendation to the President. Representative Holifield, Chairman of the Committee, has followed through with a letter to the Secretary of State officially requesting the report.

State informally requested permission to release the report to the Joint Committee. We informed State that the request should be denied at this time (1) because we believe that reports which are submitted to the President as part of recommendations for decision should not be floated beforehand in Congress, and (2) because we find the report, as it stands, unsatisfactory in the sense that it is an advocacy paper for a particular option rather than a balanced presentation of all the options.

State is politely declining Chairman Holifield's request. We think the matter may be turned off only for the time being. In order to keep this issue in hand while it is under consideration, we are stressing that the matter should be closely held. This does not preclude a balanced version of the report being released to the Committee at a later date.

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4/15/76

UNITED STATES  
ATOMIC ENERGY COMMISSION  
WASHINGTON, D.C. 20545

NSC 2780

MAR 27 1972

OFFICE OF THE CHAIRMAN

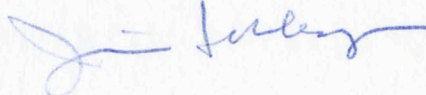
Honorable Henry A. Kissinger  
Assistant to the President  
for National Security Affairs  
The White House

Dear Henry:

I appreciate your letter of March 8, 1972, concerning the desirability of separating the specific question of our policy on the export of highly enriched uranium from the balance of the broader NSSM 120 study. This is a very constructive step since our experience has repeatedly demonstrated that we tend to make the greatest progress when we deal with discrete policy problems as they arise rather than with a variety of complex issues in one paper. We will proceed immediately with the policy study on the transfer of enriched uranium in conformance with NSSM 150 of March 13.

Insofar as the remainder of NSSM 120 is concerned, we are making a determined effort, in collaboration with other government agencies, to complete those portions of the study dealing with the U. S. international nuclear programs, as well as to complete our analysis of the U. S. domestic safeguards program, for which we have the prime responsibility.

Sincerely,



Chairman

MAR 28 1972

GROUP 1  
Excluded from automatic  
downgrading and  
declassification

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This material contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18, U.S.C., Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person

Reproduced at the Richard Nixon Presidential Library DECLASSIFIED by law.

This document has been reviewed pursuant to Executive Order 13526 and has been determined to be declassified.

NSC CORRESPONDENCE PROFILE

DOC	RECD	LOG NBR	INITIAL ACTION OFF
MO DA	MO DA HR		
327	329/12	2780	

DOC SOURCE/CLASS/DESCRIPTION

TO: PRES \_\_\_\_\_ FROM: ELIOT \_\_\_\_\_ U \_\_\_\_\_ LOG IN/OUT ONLY \_\_\_\_\_  
 KISSINGER  ROGERS, W \_\_\_\_\_ LOU \_\_\_\_\_ NO FORN \_\_\_\_\_ NODIS \_\_\_\_\_  
 HAIG \_\_\_\_\_ LAIRD, M \_\_\_\_\_ C  BUO \_\_\_\_\_ EXDIS \_\_\_\_\_  
 SCHLESINGER, J. S \_\_\_\_\_ EYES ONLY \_\_\_\_\_ LIMDIS \_\_\_\_\_  
 TS \_\_\_\_\_ CODE WORD \_\_\_\_\_ RES DATA \_\_\_\_\_  
 SENSITIVE \_\_\_\_\_

SUBJECT: Separation of Specifics on Export of Highly Enriched Uranium from Broader  
 NSSM 120 Study

REFERENCE: S/S \_\_\_\_\_ OTHER \_\_\_\_\_ NOT XEROXED \_\_\_\_\_

APP'TS: PRES \_\_\_\_\_ HAK \_\_\_\_\_ TALKER \_\_\_\_\_ MEMCON \_\_\_\_\_ DATE REQ. \_\_\_\_\_

SECRETARIAT DISTRIBUTION/ACTION

INTERNAL ROUTING AND DISTRIBUTION

ACTION REQUIRED

	ACTION	INFO	REC CY FOR
ADVANCE CYS TO HAK/HAIG	<input checked="" type="checkbox"/>		
STAFF SECRETARY (NSSM 150)		<input checked="" type="checkbox"/>	
FAR EAST			
SUB-SAHARAN AFRICA			
NR EAST/NORTH AFRICA			
EUROPE/CANADA			
LATIN AMERICA			
UNITED NATIONS			
ECONOMIC			
SCIENTIFIC	<input checked="" type="checkbox"/>		
LR PLANNING			
PROGRAM ANALYSIS			
NSC PLANNING		<input checked="" type="checkbox"/>	
CONGRESSIONAL			

MEMO FOR HAK \_\_\_\_\_ ( \_\_\_\_\_ )  
 MEMO FOR PRES. \_\_\_\_\_ ( \_\_\_\_\_ )  
 REPLY FOR \_\_\_\_\_ SIGNATURE \_\_\_\_\_ ( \_\_\_\_\_ )  
 FOR DISTRIBUTION/DISPATCH \_\_\_\_\_ ( \_\_\_\_\_ )  
 MEMO \_\_\_\_\_ TO \_\_\_\_\_ ( \_\_\_\_\_ )  
 RECOMMENDATIONS \_\_\_\_\_ ( \_\_\_\_\_ )  
 JOINT MEMO \_\_\_\_\_ ( \_\_\_\_\_ )  
 REFER TO STATE \_\_\_\_\_ ( \_\_\_\_\_ )  
 ANY ACTION NECESSARY  ( \_\_\_\_\_ )  
 CONCURRENCE \_\_\_\_\_ ( \_\_\_\_\_ )  
 DUE DATE: 4/1

COMMENTS: (Including Special Instructions)

INTERNAL/INTERIM ROUTING

DATE	FROM	TO	S	ACTION REQUIRED	CY TO
	WALSH	GOHIN			
12/5/72	John	Secretant		No action necessary	

DISPOSITION

CROSS REF WITH \_\_\_\_\_ NOTIFY \_\_\_\_\_ DATE \_\_\_\_\_  
 SEE LOG \_\_\_\_\_ DISPATCH: LETTER/MEMO \_\_\_\_\_  
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 SPECIAL FILE RQMT: \_\_\_\_\_ SA, \_\_\_\_\_ HP, \_\_\_\_\_ HM  
 SPECIAL DISPOSITION COMMENTS: \_\_\_\_\_  
 SUSPENSE CY ATTACHED: YES \_\_\_\_\_ NO \_\_\_\_\_

MICROFILM DATA

DO *[Signature]* INIT \_\_\_\_\_  
 MAY 17 1972 DATE \_\_\_\_\_  
 ORIG) NSC \_\_\_\_\_  
 TO ) PAF \_\_\_\_\_  
 WHC \_\_\_\_\_  
 SUBF

To The Vault

Orig of cover memo  
is with Mike Cahill.

WASHINGTON

THE WHITE HOUSE

Return to  
Vault.

Check with Mary M  
on originals - Thelma  
said she got the from  
Dain for use in a

NATIONAL SECURITY COUNCIL  
WASHINGTON, D.C. 20506

7799  
u/SM 56

4/16/70

CONFIDENTIAL

MEMORANDUM FOR

CHAIRMAN, NSC UNDER SECRETARIES COMMITTEE

SUBJECT: Program for International Cooperation in the Uranium  
Enrichment Field

The President has noted the NSC Under Secretaries Committee's recommendation regarding a program for international cooperation in the uranium enrichment field as proposed in your memorandum of February 26, 1970.

Before further action on this matter is undertaken, the report should address the following questions.

1. Since the report recognizes that United States policy on the gas centrifuge process may have to be reviewed, depending upon the reactions of other countries to the proposed course of action, what are the full advantages and disadvantages of the option to share both centrifuge and diffusion technology? Could the United States offer to share diffusion technology now, but accompany the offer with a straightforward commitment to consider sharing centrifuge technology at a later date? What are the relevant Congressional (JCAE) attitudes bearing upon the options?
2. What objectives of the United States — for example, technological cooperation with Europe and other countries, European integration, multinational approaches, non-proliferation, influence in the uranium enrichment field — are to be served or disserved by the options? What is the likelihood of advancing the various objectives and what are the relationships between them?
3. What are the short-range and probable longer-term problems, and possible United States responses, which may be generated by a decision of the United States to share only gaseous diffusion technology?

*Disputed 4/16 w/ Outside Rep't A*

- 4. Where does the United States stand in its diffusion and centrifuge technology and programs? What are likely future trends? What is the probable status of other countries' programs over the years without United States cooperation, and what is the interaction between their programs and those of the United States? Specifically, what are the international and domestic political implications of the recommended course of action if the United States should decide that its next enrichment plant is to be of the centrifuge type?

It is recognized that timing may be an important factor in reviewing these options. The above information, therefore, should be submitted for the President's consideration on or before May 18. The classification of the report should be up-graded if necessary to handle the supplementary information adequately. The nature and content of the review should be closely held.

  
Henry A. Kissinger

MICROFILM	DATA
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NATIONAL SECURITY COUNCIL  
WASHINGTON, D.C. 20506

CONFIDENTIAL

MEMORANDUM FOR

CHAIRMAN, NSC UNDER SECRETARIES COMMITTEE

SUBJECT: Program for International Cooperation in the Uranium  
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1. Since the report recognizes that United States policy on the gas centrifuge process may have to be reviewed, depending upon the reactions of other countries to the proposed course of action, what are the full advantages and disadvantages of the option to share both centrifuge and diffusion technology? Could the United States offer to share diffusion technology now, but accompany the offer with a straightforward commitment to consider sharing centrifuge technology at a later date? What are the relevant Congressional (JCAE) attitudes bearing upon the options?
2. What objectives of the United States — for example, technological cooperation with Europe and other countries, European integration, multinational approaches, non-proliferation, influence in the uranium enrichment field — are to be served or disserved by the options? What is the likelihood of advancing the various objectives and what are the relationships between them?
3. What are the short-range and probable longer-term problems, and possible United States responses, which may be generated by a decision of the United States to share only gaseous diffusion technology?

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4. Where does the United States stand in its diffusion and centrifuge technology and programs? What are likely future trends? What is the probable status of other countries' programs over the years without United States cooperation, and what is the interaction between their programs and those of the United States? Specifically, what are the international and domestic political implications of the recommended course of action if the United States should decide that its next enrichment plant is to be of the centrifuge type?

It is recognized that timing may be an important factor in reviewing these options. The above information, therefore, should be submitted for the President's consideration on or before May 1. The classification of the report should be up-graded if necessary to handle the supplementary information adequately. The nature and content of the review should be closely held.

Henry A. Kissinger

MEMORANDUM

THE WHITE HOUSE  
WASHINGTON

*WHTS.*

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April 11, 1970

*Al Haig*

MEMORANDUM FOR DR. KISSINGER

FROM: Al Haig *(Signature)*  
SUBJECT: Uranium Enrichment

*Shouldn't  
my letter be on  
W.P. stationery. Gen'  
letter to  
retype*

Attached is a package on U.S. cooperation in the uranium enrichment field prepared by Colonel Behr. It encloses a memorandum from the Under Secretaries Committee to the President recommending that the U.S. modify its long-standing policy of non-cooperation with other countries in the uranium enrichment field. It is believed that additional information is needed in order to make a balanced presentation of the arguments to the President. Therefore, a memorandum (Tab I) to Elliot Richardson has been prepared which requests supplementary information. I had thought that it might be helpful for your relationship to discuss the memorandum with him prior to signing it. However, since we have not been able to accomplish this in two luncheon meetings, I believe you should go ahead and sign the memorandum.

The memorandum to the President (Tab II) is only a status report for information purposes and I do not recommend that you send it to the President.

Attachment

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CONFIDENTIAL

April 11, 1970

MEMORANDUM FOR DR. KISSINGER

FROM: Al Haig  
SUBJECT: Uranium Enrichment

Attached is a package on U.S. cooperation in the uranium enrichment field prepared by Colonel Behr. It encloses a memorandum from the Under Secretaries Committee to the President recommending that the U.S. modify its long-standing policy of non-cooperation with other countries in the uranium enrichment field. It is believed that additional information is needed in order to make a balanced presentation of the arguments to the President. Therefore, a memorandum (Tab I) to Elliot Richardson has been prepared which requests supplementary information. I had thought that it might be helpful for your relationship to discuss the memorandum with him prior to signing it. However, since we have not been able to accomplish this in two luncheon meetings, I believe you should go ahead and sign the memorandum.

The memorandum to the President (Tab II) is only a status report for information purposes and I do not recommend that you send it to the President.

Attachment

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AMH:JTH:mlr:4/11/70

MEMORANDUM

ACTION

## NATIONAL SECURITY COUNCIL

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March 23, 1970

MEMORANDUM FOR DR. KISSINGER

FROM: Robert M. Behr *RM*

SUBJECT: US Cooperation in the Uranium Enrichment Field

The NSC Under Secretaries Committee met on February 19, 1970, to consider an interagency paper (Tab B) on US cooperation in the uranium enrichment field.

The Under Secretaries Committee has forwarded a memorandum to the President (Tab A) recommending that the US modify its long-standing policy of not cooperating with other countries in the uranium enrichment field:

1. By offering to share US gaseous diffusion technology and to assist the Europeans to construct a multinationally owned and operated gaseous diffusion plant in Western Europe, with acceptable safeguards; and
2. By being prepared to discuss the possibility of similar cooperation with countries such as Canada, Australia and Japan.

Actual sharing or assistance would, of course be contingent upon the execution of a suitable agreement or agreements for cooperation which would require both Presidential approval and review by the Joint Committee on Atomic Energy.

BACKGROUND

With the growing demand for production of electrical power by means of nuclear reactors, there is a parallel demand for nuclear material to fuel these reactors. Two techniques are normally used to obtain enriched uranium -- (1) the gaseous diffusion technique and (2) the gas centrifuge process.

Diffusion involves very large plant facilities and consumes great quantities of electricity. Conversely, gas centrifuges can be housed in smaller plants and need much less electricity. Diffusion plants can be so engineered that the nuclear material produced in the enrichment process is not suitable for nuclear weapons. Centrifuges, however, can be

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engineered in such a way that rather simple adjustments to the control mechanisms will produce weapons grade uranium. Thus the centrifuge technique has a greater potential for nuclear weapons proliferation.

With the exception of some earlier and limited programs of cooperation with the British, US policy has been (1) to withhold enrichment technology from other countries, and (2) to reduce incentives to develop enrichment facilities abroad by supplying U-235 under stable conditions to countries that accept bilateral or multilateral safeguards. This program has also produced economic advantages for the US.

Today, several factors suggest that a new policy may be warranted, perhaps the most important being that foreign countries are attracted both by the prospect of not being dependent upon the US for nuclear fuel supply and by the commercial possibilities of exporting fuel and nuclear reactors. Furthermore, enrichment plants will be built abroad, with or without US help. The British, Dutch and Germans have concluded a tripartite agreement to develop the centrifuge process and plants, with expressed interest in later export. There are indications that the Belgians and Italians hope to join in this endeavor. Australia has recently expressed a similar interest.

The questions, therefore are whether uranium enrichment developments and plants will proceed with or without US cooperation, and what are the possible advantages and disadvantages of various courses of action. The interagency paper (Tab B) develops three policy options:

1. Cooperation in the diffusion field alone.
2. Cooperation in both the diffusion and centrifuge fields.
3. Maintain our present policy of non-cooperation in the uranium enrichment field.

The Under Secretaries Committee recommends Option 1 -- cooperation in the diffusion field -- but no transfer or cooperation in the gas centrifuge field.

While the proposed course of action may be sound, we consider the inter-agency study lacking. Before forwarding it to the President for decision, the study should be balanced by answers to the following questions:

1. Since the report recognizes that US policy on the centrifuge process may have to be reviewed, depending upon other countries' reactions to a US proposal to share diffusion technology, what are the full advantages and disadvantages of the option to share both centrifuge and diffusion technology?

Could we offer to share diffusion technology now, but accompany the

offer with a straightforward commitment to consider sharing centrifuge technology at a later date, that is, after our current research has been concluded? To what extent do Congressional (JCAE) attitudes bear upon the practicality of any option involving sharing of centrifuge technology?

[The report is now biased in favor of the recommended course, thereby short shrifting the other options which may be more attractive to the US in longer-term.]

2. What US objectives are to be served or disserved by the various options? What is the likelihood of advancing various objectives, and what are the relationships between these objectives?

[This exercise initially began as an attempt to inhibit the development and ultimately the spread of centrifuge technology in Europe and elsewhere. The British-Dutch-German agreement on the centrifuge project has made the attainment of such an objective less likely, although it may still be that superior US diffusion technology could influence Europeans toward its acceptance as the most economical alternative open to them at the present time.]

3. What are the short-range and the longer-term problems which may be opened up by a US decision to share only diffusion technology?
4. Where does the US stand in its diffusion and centrifuge programs? What is the probable status of other countries' programs over the years without US cooperation, and the interaction between other programs and those of the US? Specifically, what happens if a US offer to cooperate with the Europeans in the gaseous diffusion field succeeds, and then the US decides its next plant should be of the gas centrifuge type?

In the consideration of the NSC/USC paper, we have consulted with our Planning and European staffs, OST, BOB, and Mr. Flanigan's staff. All agree that the above questions should be answered and reviewed before the report goes to the President for decision.

Consequently, attached at Tab I is a memorandum from you to the Chairman of the Under Secretaries Committee which states that the President (1) has noted the report and its recommendation and, (2) has requested a report on the questions mentioned herein to be submitted, on or before May 1, for his overall consideration. Your memorandum also mentions that the nature and content of the review should be closely held.

Attached at Tab II is a memorandum from you to the President which informs him of the report and, its recommendation, and of your action requesting the Under Secretaries Committee to submit more information.

RECOMMENDATIONS:

1. That you sign the memorandum to the Chairman of the Under Secretaries Committee at Tab I.
2. That you sign the memorandum to the President at Tab II. [Tabs to accompany information memorandum to the President.]





MEMORANDUM

INFORMATION

## NATIONAL SECURITY COUNCIL

SECRET

## MEMORANDUM FOR THE PRESIDENT

FROM: Henry A. Kissinger

SUBJECT: Program for International Cooperation in the Uranium  
Enrichment Field

The NSC Under Secretaries Committee met on February 19 to consider an interagency paper (Tab B) on US cooperation in the uranium enrichment field.

The Under Secretaries Committee has forwarded a memorandum to you (Tab A) recommending that the United States modify its long-standing policy of not cooperating with other countries in the uranium enrichment field:

1. by offering to share US gaseous diffusion technology and to assist the Europeans to construct a multinationally owned and operated plant in Western Europe; and
2. by being prepared to discuss the possibility of similar cooperation with countries such as Canada, Australia and Japan.

Actual sharing or assistance would, of course, be contingent upon the execution of a suitable agreement or agreements for cooperation which would require your approval and review by the Joint Committee on Atomic Energy.

With the growing demand for production of electrical power by means of nuclear reactors, there is a parallel demand for nuclear material to fuel these reactors. Two techniques are normally used to obtain this enriched uranium or fuel -- (1) the gaseous diffusion technique and (2) the gas centrifuge process (which, for a number of technical reasons, offers greater opportunities for nuclear weapons proliferation than does the diffusion technique).

With the exception of some earlier highly restricted programs of cooperation with the British, US policy has been (1) to withhold enrichment technology from other countries, and (2) to reduce incentives to develop enrichment facilities abroad by supplying enriched uranium for fuel under stable conditions to countries that accept bilateral or multilateral safeguards.

SECRET

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This document has been reviewed pursuant to Executive Order 13526 and has been determined to be declassified.

Today, foreign countries are attracted both by the prospect of not being dependent upon the US for nuclear fuel supply and by the commercial possibilities for exporting fuel and nuclear reactors. Enrichment plants will be built abroad, with or without US help. The British, Dutch and Germans have recently concluded a tripartite agreement to develop the centrifuge process and plants, with expressed interest in later export. There are indications that the Belgians and Italians hope to join in this endeavor. Australia has recently expressed a similar interest.

The questions, therefore, are whether uranium enrichment developments and plants will proceed with or without US cooperation, and what are the possible advantages and disadvantages of various courses of action? The interagency paper (Tab B) develops three policy options:

1. Cooperation in the diffusion field only.
2. Cooperation in both the diffusion and centrifuge fields.
3. Maintain our present policy of non-cooperation in the uranium enrichment field.

The Under Secretaries Committee recommends Option 1 for your approval. While the proposed course of action may be sound, the report lacks some information which is essential to any decision on these options.

In order to get a balanced picture of the options for you, I have requested that further information from the Under Secretaries Committee be submitted for your overall consideration on or before May 1. I have also stressed that the nature and content of this review should be closely held.

Both Mr. Flanigan's office and the Office of Science and Technology agree that supplementary information should be made available before considering the report for decision.

A

THE UNDER SECRETARY OF STATE  
WASHINGTON

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February 26, 1970

NSC Under Secretaries Committee

MEMORANDUM TO THE PRESIDENT

SUBJECT: A Program for International Cooperation  
in the Uranium Enrichment Field

Summary and Recommendations:

I. Recommendations:

The Under Secretaries Committee recommends that subject to your approval, and following appropriate consultations with the Joint Committee on Atomic Energy, the United States modify its long-standing policy of not cooperating with other countries in the uranium isotope enrichment field. Specifically, we recommend that at the appropriate time and in accordance with the negotiating strategy recommended in the attached paper, the Department of State and the AEC initiate exploratory talks with certain West European allies and the Commission of the European Communities on the possibility of the United States' assisting the Europeans construct a multinationally owned and operated gaseous diffusion plant that would be located in Western Europe.

We would report the results of these talks together with further recommendations to the National Security Council as soon thereafter as possible. Moreover, the actual implementation of any modification of our present policy would be contingent upon the execution of a suitable agreement or agreements for cooperation with the countries involved, which would require Presidential approval and review by the Joint Committee on Atomic Energy in accordance with statutory procedures.

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## II. Summary:

### A. The Proposal

The proposal for cooperation which we recommend can be summarized as follows: Beginning in early 1970, the US would explore the possibility of cooperating with the Commission of the European Communities, the six community countries and the United Kingdom in building a multinational diffusion plant in Western Europe. The US would agree, under mutually acceptable conditions, to make available comprehensive, up-to-date diffusion technology, on a classified basis and subject to agreement on matters pertaining to plant and personnel security. The plant and its product would be subject to mutually acceptable safeguards. Including France in the project presents certain problems because the French have not signed the LTBT or the NPT, but we believe these problems could be dealt with by subjecting the plant and its products to safeguards that would conform with the NPT. The US would be compensated for the use of its technology and would seek agreement on a time schedule leading to plant operation toward the end of the 1970's. We would be prepared, if requested, to discuss the possibility of similar cooperation with other friendly countries, including Australia, Canada and Japan. No information on US gas centrifuge technology, as distinguished from gaseous diffusion technology, would be transferred in the process.

The advantages and disadvantages of this proposal, including alternative courses of action, are discussed in detail in the attached paper. The principal factors that have influenced our recommendation are summarized below.

### B. Determination of Foreign Countries to Build Their Own Capacity

1. During the next two decades there will be a substantial growth in the use of nuclear power and enriched uranium throughout the world.

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2. A number of countries, particularly in Western Europe, are determined to acquire independent enrichment capabilities.

3. Great emphasis is being placed abroad on developing the gas centrifuge process of enriching uranium, which is a serious cause of concern from a proliferation standpoint. The centrifuge is particularly susceptible for use in clandestine operations because the plant can be small and can have relatively low requirements for electricity, as contrasted with gaseous diffusion technology. The UK, the Netherlands and Germany are in the final stages of developing a tripartite centrifuge project aimed at achieving a modest production capability in the mid-1970's.

C. Possibility of Influencing Developments Abroad

Through a policy of cooperation we might influence developments abroad to serve US economic, political and nonproliferation interests.

1. We could provide our allies with an attractive alternative to committing the lion's share of their investment resources to rapid development of the centrifuge process. Our proposed plan for cooperation would not seek to obstruct the tripartite project because we recognize its political importance and view a multinational centrifuge project as preferable to several independent national efforts. Nevertheless, we believe it would be mutually beneficial to offer the Europeans an additional option for satisfying their enrichment ambitions. (See Annex A, for estimated cost data on a European diffusion plant.)

2. We might induce other countries to delay their production plans for several years (until the late 1970's) so that US production capacity would be fully utilized before other

large scale new production comes on line. We also should coordinate our enrichment plans with the Europeans and others to reduce the prospect that new enrichment capacity will be under-utilized to a significant degree.

3. We have had repeated indications that Europeans and others would welcome our cooperation in the gaseous diffusion field. Moreover, the European Commission (EURATOM) has recommended that the Community explore both the diffusion and centrifuge processes before making major investment decisions. Our proposal would be responsive to these desires. There also is evidence that the program we are proposing could improve the prospect of US reactor sales to Western Europe, particularly in France. We also recognize that there might be some adverse reactions to our proposal abroad. We believe these can be minimized, perhaps eliminated, by adopting an appropriate negotiating strategy.

4. The program of cooperation could strengthen the Commission of the European Communities and as a consequence, our efforts in support of European integration.

5. An early and comprehensive offer of U.S. assistance in the diffusion field could have a beneficial effect in inducing certain key countries (such as Germany) to ratify the NPT, because it would represent a significant liberalization in US foreign nuclear policy, and would add credibility to past US expressions of willingness to help parties to the NPT in the field of peaceful uses. (On the other hand, since we expect to cooperate with only a limited number of countries that are able to meet our conditions, our proposal would not enhance NPT acceptance in countries not benefiting from US assistance and could prove to be especially troublesome in the case of Japan should it not be possible due to legal considerations for us to satisfy in some way Japan's aspirations in the enrichment field.)

6. We believe our proposal would provide the US with a number of other political and economic benefits. We are anxious to assure that foreign enrichment programs are effectively safeguarded and that the plants and products are used only for peaceful programs. We believe the US might gain a greater voice in these matters through constructive association with foreign enrichment plants than by continued non-participation. Moreover, we would plan to obtain significant revenues from our technology as well as a meaningful, continuing voice both in the management of the plant and its export policies.

D. Related Issues

We have also considered the following related issues which merit special attention:

1. Whether Our Cooperation Should be Limited To States That Sign the NPT

We believe US cooperation preferably should be extended to those interested states in Western Europe that have signed the NPT. We would not imply that ratification of the NPT is a sine qua non for our cooperation, but we would express the view to our prospective partners that our ability to complete and execute cooperative arrangements would be greatly facilitated if they signed and ratified the Treaty.

France, which will probably not sign the Treaty, would not be excluded for reasons discussed in detail in the attached paper.

2. Implications for our Relations with Other Countries

While the immediate proposal relates to cooperation in the gaseous diffusion field with Western European allies, it must be recognized that, if this is undertaken, cooperation with other friendly countries such as Canada, Australia and Japan would be difficult to refuse if they could meet our general conditions. While any such cooperative projects would have to be

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considered case by case on their merits, we would expect the following conditions to apply inter alia:

(a) Our assistance would be furnished on a classified basis; (b) We would consider associating ourselves only with well conceived projects of serious intent where the prospects of adequate financing are high and where the return to the United States in terms of revenues and influence appeared to warrant the provision of US technology; (c) We would give preference to multilaterally controlled and owned ventures; and (d) We would insist that the enrichment plant and its products be subject to safeguards in conformity with the NPT. Furthermore, since our cooperation would take place pursuant to one or more civil agreements, we would seek a guarantee that the plant and its product would be used only for peaceful purposes. Moreover, any US restricted data would be furnished only to authorized personnel, under strict security control, and on a need to know basis for use in the cooperative project.

### 3. The Implications of the Foregoing Proposal on the Disposition of the AEC Gaseous Diffusion Facilities

The Administration has decided that there should be no disposal of AEC diffusion plants for the time being, but that transfer to private industry is the ultimate objective. The benefits to the US of the cooperative program outlined above are independent of whether US enrichment facilities are publicly or privately owned. In the event of private ownership, the operators of the US facilities could have a direct role in the implementation of the cooperative program.

### 4. Negotiating Strategy

A proposed negotiating strategy forms an integral part of our recommendations and is spelled out in Part V of the paper. However, both the timing and manner of exploratory conversations with the Europeans and consultations with other countries would be subject to continuous review by the AEC and the Department of

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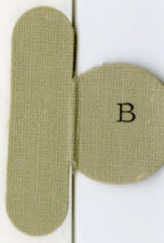
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State.

Chairman,  
The Under Secretaries Committee



Elliot L. Richardson  
Under Secretary of State



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A Program for International Cooperation in  
the Gaseous Diffusion Field

I. Background and Discussion

A. Present U.S. Policy

It is United States' policy to classify information on isotope enrichment technology, and to withhold it from other countries, on the premise that the threat of nuclear weapons proliferation increases as the number of enriching facilities throughout the world increases. (In the post World War II period, the only exception to this policy was a limited exchange on the centrifuge process with the United Kingdom between 1960 and 1965.) We have sought to reduce incentives to develop enriching facilities abroad by supplying U-235, under stable and attractive conditions, to countries that accept bilateral or multilateral safeguards.

This approach has delayed the construction of foreign enrichment facilities: outside of the Communist Bloc, only France and the United Kingdom have enrichment plants of modest production scale. It has also resulted in political and economic advantages for the United States; including significant returns in foreign revenues.

B. Need for a New Policy

Several factors suggest that a change in policy is now warranted.

1. During recent years, several industrially advanced countries have been rapidly shifting to the use of nuclear power for generating electricity. This trend is expected to accelerate in the future. It has been estimated that by the year 1980 approximately 320,000 megawatts of nuclear power will be installed throughout the world. This would constitute roughly 13% percent of a total installed capacity of 2,400,000 megawatts.

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Enriched uranium is the preferred fuel for the nuclear reactors used to generate electricity and the only fuel for commercial reactors of US design, which enjoy predominant market acceptance in many nations of the world.

The projected demand, both domestic and foreign, for enriched uranium can be met by existing and planned US capacity until the late 1970's. However, by that time additional new capacity will have to come on line.

2. Because of the growing use of enriched uranium reactors, several foreign countries are seriously concerned about their total dependence on the US for this nuclear fuel. Despite attractive US fuel supply policies, they are worried about the certainty of future supplies and about the possibility, however remote, that the US might use its monopoly position at some time to achieve political or economic objectives to which they may not subscribe. Several countries are also strongly attracted by the commercial possibilities of an enrichment plant, both as source of fuel and as a step towards the export of fuel and reactors. It is nearly certain that some new foreign enrichment capacity will be built in Europe and possibly in Japan and Australia, even if the costs of the product exceed US enrichment prices. (Some countries believe they ultimately might meet or better the current US price of \$26 per kilogram of separative work.)

The British, Dutch and Germans have reached agreement on a tripartite project to establish a modest production capability in Western Europe by the mid-1970's based on the gas centrifuge process.\* The Commission of the European Communities has proposed that the EURATOM member states undertake pilot projects on both the gaseous diffusion and the gas centrifuge processes, so that they

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\* By the mid 1970's, the centrifuge plant at Capenhurst is expected to reach a capacity of 200 tons sw/year and the one at Almelo in the Netherlands 100-150 tons sw/year. About 100 tons of the ultimate output of the two plants is expected to be available by the year 1972. This compares with the US diffusion plant capacity of 17,000 tons sw/year.

can make a major investment decision on a large scale enrichment plant by the mid-1970's. Outside of Europe, Australia and Japan have serious R&D programs under way, primarily in the centrifuge field, and Canada has expressed a strong interest in building a gaseous diffusion enrichment plant in its northwest provinces. (A survey of current foreign programs and plans is included in Annex B.)

3. We have a strong incentive to rationalize our own enrichment plans with those of the Western Europeans with the view of assuring that our enrichment capacity is fully utilized before a major European plant comes into operation. (It would take the Europeans approximately six years to construct a major gaseous diffusion or gas centrifuge plant from the time of a firm decision.) This would suggest a European target of the late 1970's, since currently planned US capacity will be sufficient to meet all domestic and foreign needs until that date. If a major European plant comes into operation as little as two or three years prior to that date, the US could suffer a significant loss of revenues.\* However, after the late 1970's further increases in our domestic demand should serve to offset any losses we might suffer in the foreign market. The Europeans should have an interest in coordinating their plans with ours since we both wish to avoid any over-commitments and the cheapest incremental enrichment capacity in the world between now and the late 1970's can be achieved through currently planned improvements in the USAEC's gaseous diffusion capacity.

4. From the standpoint of proliferation, the development of the centrifuge process is a cause of serious concern. Unlike the massive diffusion plants which require enormous inputs of electricity and large building complexes, the centrifuge process lends itself to clandestine operation. Small cascades could be installed in small buildings or warehouses and could be operated to produce significant amounts of weapons-grade uranium without use of a heavy load of electricity to signal their existence.

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\* Our estimated annual sales of enrichment services under current price and technical conditions to West European nations (France and the UK excluded) in millions of dollars, follows: CY 1976-\$117; CY 1977-\$148; CY 1978-\$176; CY 1979-\$197; CY 1980-\$234; TOTAL \$872.

Gaseous diffusion plants, in contrast, can be designed to produce only low enriched material that would be unsuitable for use in nuclear weapons.

For these and other reasons, the United States has strictly limited the dissemination of information on advances in centrifuge technology. We have a formal agreement with the UK and informal agreements with the Dutch and the Germans to limit access to centrifuge information according to a common classification guide prepared by the USAEC. These agreements do not preclude technical cooperation among the parties, so long as the common guidelines are respected.

The United States has not opposed the German, Dutch and British efforts at tripartite cooperation in this field because we have felt that a multi-national project, with a built-in "adversary" element of control is preferable to three independent national developments which would otherwise be likely to emerge. Moreover, we have recognized the political importance of the project to our allies and have been sympathetic to the British interest in forging closer ties to the Continent. The three governments have indicated that their project agreement will include assurances against non-proliferation, including adequate safeguards on the plants and the U-235 they will produce.

We remain concerned, however, about the possible proliferation of such facilities around the world, especially if centrifuge machines and/or centrifuge technology were to be exported on an unrestricted commercial basis to non-nuclear-weapons states.

We are not under any illusion that access to U.S. diffusion technology by itself would prevent any country with a strong military, political or commercial motive from developing centrifuge enrichment facilities if they decide to and are capable of doing so. However, the main thrust of resource investment, especially in industrially advanced countries, might well be diverted to gaseous diffusion technology by a genuine U.S. offer to cooperate.

5. A policy of U.S. cooperation in the diffusion field might improve the prospects for U.S. reactor sales in Western Europe, particularly France. It would also provide the U.S. with a number of other political and economic benefits including a greater voice in safeguards on a foreign plant and its product, significant revenues for our technology, and a continuing voice in management and export policies.

6. The Non-Proliferation Treaty has led several signatory, or potential signatory, nations to indicate that their willingness to relinquish the right of acquiring nuclear weapons should remove the basic reason for excluding them from access to uranium enrichment technology. They also believe that such access would be a reasonable concession for the nuclear weapons states to make.

Non-nuclear weapons countries that adhere to the NPT will commit themselves to accept international safeguards on their peaceful nuclear activities. The Treaty, however, imposes no constraints against building uranium enrichment plants, provided the required safeguards are applied to such plants and their products.

An offer of U.S. assistance in the diffusion field might favorably influence certain key countries (such as Germany) in deciding on NPT ratification, because it would represent a significant liberalization in U.S. foreign nuclear policy, and would add credibility to past U.S. expressions of willingness to help parties to the NPT in the field of peaceful uses.

## II. U.S. Policy Options - Cooperation in the Gaseous Diffusion Field Alone

The U.S. appears to have two basic policy options; (a) cooperation with the Europeans and perhaps others in the gaseous diffusion field alone, or in both the diffusion and gas centrifuge fields; or (b) continuation of our present policy of non-cooperation.

### A. Cooperation in the Diffusion Field

This approach would have the following features:

1. Countries included in the initial offer. The United States would undertake informal, exploratory talks with the member states of EURATOM (France, West Germany,

Italy, the Netherlands, Belgium and Luxembourg), the United Kingdom and the Commission of the European Communities, aimed at the construction of a multinational gaseous diffusion plant in Western Europe that would come into operation in the late 1970's.

Our initial proposal would include these allied nations because they are the most advanced in the enrichment field and are the most determined to establish independent facilities. Other Western European countries might be included subsequently.

Because it appears that France will not be a party to the Limited Test Ban Treaty and the NPT, and because France is a nuclear weapons power, including France in a cooperative project presents special problems. We expect that the guarantees and protections referred to on page 5 of the summary would be effective. They would include a limitation providing that US restricted data could be used only on the cooperative project. (Moreover, France already has in our opinion sufficient enrichment capacity to satisfy the requirements of its weapons program.) Notwithstanding this fact, however, it must be recognized that the French diffusion plant at Pierrelatte might benefit indirectly from French access to US diffusion technology should French participants in the cooperative project pass on information about the US technology involved to Pierrelatte. To the extent that there is risk that this might occur, it is possible that US participation in the cooperative project could give rise to an exception to NSAM 294. NSAM 294 (attached at Annex C) is directed against US assistance in the development of a French nuclear weapons capability. (The policy set forth in NSAM 294 is currently under review under the terms of NSSM 71 of August 14, 1969.)

Furthermore, the US has provided enriched uranium to France (through EURATOM) for use in French civil nuclear programs. We believe including France in the cooperative project is essential to its success because if France were excluded, EURATOM would probably have to be ruled out as a participant as well. (Some high level French officials have indicated informally that US cooperation with a European gaseous diffusion plant would be welcome.)

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2. US Contributions. We would expect our cooperation and the plant operations to take place on a classified basis in accordance with mutually agreed classification standards. The precise degree of technical assistance the US would provide the project, as well as the compensation it would receive, would be subject to negotiation. We anticipate, however, that when the exchange was implemented, the US would furnish its partners comprehensive, up-to-date information on its gaseous diffusion process and technical advice and assistance in design, construction and operation of the plant.

One particularly sensitive item is barrier manufacturing technology. We recognize that the Europeans will wish to acquire their own barrier manufacturing capability, either initially or for later barrier replacements and plant expansion. Any cooperative venture which does not result in a truly independent European capability, that is, facilities which can be operated, maintained, and, if necessary, expanded without further US involvement, would not meet European objectives and would be unacceptable. In considering this matter, it must be recognized that the Europeans are unlikely to undertake a major financial commitment to build a gaseous diffusion plant (which would entail some reorientation away from the centrifuge) unless they were assured of the provision of comprehensive US technology, which is the most advanced in the world. Access to US barriers would be of great assistance to technically competent people who were trying to develop an independent capability. Accordingly, we would not rule out the possibility of providing the Europeans barrier manufacturing data if it appeared to be an important element in the negotiations and if we were assured of an equitable return. One method would be to offer to provide the Europeans US manufactured barriers for the first plant and transfer barrier manufacturing technology at a later date.

3. Quid Pro Quo. In return for its assistance, the U.S. would inter alia, expect to receive financial compensation for the information it provides and a continuing voice in the project's management and control, including export policies. We would expect that the plant and its products would be subject to safeguards arrangements and physical and personnel security policies mutually satisfactory to the parties concerned. Finally, we would seek

to reach agreement on a time schedule which would lead to full plant operation when the present and projected U.S. capacity is no longer adequate to meet both domestic and and foreign demand for enriched uranium.

4. Timing. Cooperation would be carried out in several phases. During the first phase we would assess with our prospective partners the attractiveness of diffusion technology in the European context, the optimum plant size, its location and other planning requirements. In the second phase, perhaps beginning in late 1972, we would provide detailed US design data. (European agreement to go ahead on this basis undoubtedly would depend on an early, firm US commitment on the general scope and degree of assistance we would provide at a later date.) The final phase, construction and operation of the plant, would occur in the late 1970's.

5. Cooperation with Additional Countries. Without taking the initiative, the U.S. would be prepared to consider entering into similar cooperative efforts with other friendly countries, on a case-by-case basis, if they could meet our basic general conditions. These would include conducting the cooperation on a classified basis, evidence that the project was well conceived and likely to achieve adequate financial support, an adequate return for the provision of U.S. technology, and assurance that the plant and its products would be under adequate safeguards. Preference would be given to projects organized on a multi-lateral basis. If Australia, Canada and Japan could meet these requirements, we would consider partnership with them. Japan, however, might have difficulty meeting these conditions because of its legal inhibitions against classifying atomic energy information. This could present us with a serious problem since next to Europe, Japan is likely to have the most legitimate interest in its own enrichment plant.

As a practical matter, the number of cooperative arrangements with other countries would be very limited because of the sizeable investment required for gaseous diffusion plants.

B. Advantages. The principal arguments favoring this approach may be summarized as follows:

1. It would provide the Europeans and others with an attractive alternative to exclusive development of the gas centrifuge process;

2. It would assure that these efforts are undertaken on a classified basis and under adequate safeguards;

3. It would encourage the Europeans and others to construct their plants on a time scale that would assure maximum use of existing U.S. capacity;

4. It would enable the U.S. to obtain reasonable compensation for the use of U.S. technology and a U.S. voice in the continuing management of the project, including its export policies. This would preserve important economic benefits for the use of our technology, which could otherwise be diminished or lost through the construction of an independent foreign enrichment capacity;

5. It would help us create a more favorable climate for the sale of U.S. reactors and equipment abroad;

6. It could serve to strengthen EURATOM as an institution which in turn could strengthen the overall movement towards greater European unity.

C. Disadvantages

1. It might be regarded by some of the European nations involved as interference with their efforts to achieve a degree of independence from the U.S. in the enrichment field.

2. The Europeans might find it preferable, given their interest in the gas centrifuge, if we evidenced a willingness to cooperate in both the gaseous diffusion and gas centrifuge fields. Since we are not prepared to be forthcoming in meeting such a request, the tripartite countries might regard our offer as a ploy to delay and perhaps subvert their decision to proceed in the development of the centrifuge process. There also might be

suspicious that we are holding back cooperation in the gas centrifuge field because we have achieved an important technological breakthrough.

3. There would be an additional risk that U.S. gaseous diffusion technology might fall in the hands of countries that might wish to use it for military purposes. This would be true even if our cooperation were handled on a classified basis.

4. The Europeans conceivably might not be successful in their efforts to construct a viable and economically competitive enrichment plant without our support. Hence our assistance might serve to accelerate their ability to displace our enrichment services in the European market.

5. Although many countries would benefit from the existence of more than one source of enriched uranium, we expect to cooperate with only a limited number of countries that are able to meet our conditions. Our proposal would not enhance NPT acceptance in countries not benefiting from US assistance, and as noted it could prove to be especially troublesome in the case of Japan.

#### D. Anticipated Foreign Reactions

Whether the possible advantages of this alternative outweigh the possible disadvantages is related in large part to the reaction that might be expected from other countries.

1. The Commission of the European Communities. The EC Commission has implied that it would welcome a US proposal to cooperate in the diffusion field. It would mesh neatly with the Commission's own proposal to bring large scale enrichment facilities into operation towards the end of the next decade.

2. France. France has proposed at the Hague Summit that a European isotope separation plant be established. France would probably be attracted by the US proposal because its experience and investment in diffusion technology would give it a place of leadership in the co-

operative project. On the other hand the French may resent our proposal if they still hope their own diffusion technology should provide the basis for European cooperation.

3. The Tripartite Countries. The Dutch, German and British reactions are likely to be mixed since they may view it as hostile to their own plans to pursue the gas centrifuge and they may be hesitant to get involved in an additional European enrichment venture. Moreover, these three countries, especially the Netherlands, are unlikely to abandon their currently planned efforts in the centrifuge field. On the other hand, given the developmental state of their gas centrifuge technology they might on reflection welcome the more proven option that we would propose in deciding on the nature of the large scale enrichment capacity that Europe should construct. We know, for example, that a number of German interests would favor this type of cooperation with the US. Since our offer of cooperation would include these three countries, we would serve to minimize an impression that we are taking an initiative solely hostile to their tripartite centrifuge efforts.

Also, the British might be uneasy about any proposal that would embroil their bid to enter the Community in an overt intra-Community debate about how to proceed in the enrichment field. However, if the tripartite project becomes a divisive element in the UK accession debate, the UK and some EC countries might use a well-timed US proposal as a means of reaching a compromise solution to the enrichment question.

4. Belgium and Italy. Both Belgium and Italy have evidenced a keen interest in discussing possible participation with the tripartite project and have already had informal conversations with the three countries. The Belgians and Italians would probably favor the US option as another means of getting into the enrichment business with their Common Market partners on a more equal footing.

5. Japan and Australia. These countries can be expected to want to benefit from any change in US policy and would surely insist on treatment comparable to their European competitors. Moreover it is basic US Government policy to treat Japan and Australia whenever possible on

an equal footing with our NATO allies. The possibility of the uncontrolled dissemination of US classified data through cooperation with Japan must be taken into account, however, because of Japan's legal prohibition against national security classification.

6. Canada. We are exploring with Canada the possibility of moving towards a common energy policy with respect to oil, natural gas, coal, electricity and uranium. We already have extremely close ties with Canada in the nuclear field.

Canada has expressed interest in cooperating with the United States in constructing a diffusion plant. Given this interest, our close economic and political ties with Canada, and the importance of uranium to the Canadian economy, failure to make some provisions for Canada in any scheme for cooperation in the enrichment field would be greatly resented in Canada and could be detrimental to US-Canadian relations.

7. The USSR. Soviet propaganda has reflected displeasure towards the tripartite centrifuge project. The USSR might react similarly to any US proposal to cooperate in the enrichment field which includes the FRG.

In reality, however, the Soviets are likely to feel easier about a German project in which we exert influence than in an independent one. They are also not likely to have a basis for serious concern since our proposal is aimed at deferring construction of a major foreign enrichment capacity and providing the Europeans with an alternative to exclusive development of the centrifuge process. In any case, we should not let the prospect of continued Soviet attacks against the FRG deter US cooperation in the enrichment field.

8. European Countries Not Included and the LDC's. The reactions of European countries not included in an initial US proposal to cooperate and of most less developed countries would probably not be hostile, or present insurmountable obstacles to implementing this plan for cooperation. The financial and technological investment in a diffusion plant is so great that only the most industrially advanced countries could seriously consider

participation with the United States in this field. Moreover, other countries might see a more diversified source of supply as in their interest. It should also be noted that the NPT strongly encourages parties to cooperate with other nations in the peaceful nuclear field but allows them the discretion of determining whether or not it is in their interest to do so.

### III. US Policy Options - Cooperation in Both the Gaseous Diffusion and Gas Centrifuge Fields

The US could offer (under terms comparable to those outlined above) to cooperate with the West Europeans and others in both the diffusion and centrifuge fields instead of in the diffusion field alone. Under this option we would provide our partners with a comprehensive, current picture of where US technology stands in both fields, and we would then consider actively assisting the Europeans in the process or processes they deemed most suitable. This might include extensive cooperation in either field or in both, depending on the foreign programs that develop.

#### A. Advantages

This approach would have the following advantages:

1. It would be more flexible and would permit cooperation with the Europeans in the technology of their choice, which they would be able to make in full knowledge of where the U.S. technology stands in both fields. (Countries with high power costs and uncertain demands for U-235 may prefer the centrifuge process because of its lower electricity requirements and because it can be constructed in modest plant increments.)

2. Some of the arguments favoring U.S. participation in a diffusion plant appear to apply equally to participation in a centrifuge effort. For example, since we probably enjoy a technological lead over the Europeans in the centrifuge field, we might be able to obtain adequate financial returns for a US contribution. Moreover, since the centrifuge process presents greater proliferation risks than diffusion, it could be argued that it would be all the more important for the U.S., through cooperation, to exert a significant control over foreign developments in this field.

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## B. Disadvantages

1. The central and very serious disadvantage of this alternative is that the U.S. would directly contribute to the dissemination of centrifuge technology and perhaps hasten its application, with the attendant increased risk of proliferation.

2. One of the major objectives of a U.S. initiative at this time would be to offer foreign countries an alternative to the development of centrifuge technology in the hope that they might make their major investments in the diffusion field.

## C. Comment

In the event the U.S. offer to cooperate in the diffusion field alone were rejected and the Europeans appeared intent on proceeding with a major gas centrifuge production plant, we would always have the opportunity of reviewing our various options. But, at this time, we recommend that no information on U.S. centrifuge technology, including cost data, be transferred to any other country or organization.

## IV. U.S. Policy Options-Maintain Our Present Policies

The arguments for and against this approach are as follows:

### A. Advantages

1. It is still possible that the Europeans and others will not be able to muster the resources to build a large enrichment plant. Even with the necessary political will and financial investment, it may take them several years to realize their ambitions. Given this uncertainty, it might be in our interests not to cooperate but to compete aggressively for the foreign market for enrichment services.

2. As already noted, any program of US cooperation, even if conducted on a classified basis, would add to the risk that US information might fall into the hands of nations desiring to use it for military purposes.

3. Unless we were prepared to cooperate with everyone (which is not proposed) we might encounter adverse reactions from those nations not included in our offer.

4. Cooperation in the development of foreign enriching capabilities might complicate the transfer of AEC diffusion plants to private industry that the President has defined as an ultimate goal. However, the attractiveness of these plants for private investment may not, in any event, depend heavily on the potential foreign market for enriched uranium because of the probability that other nations will develop an independent capability with or without US help.

#### B. Disadvantages

1. The foregoing arguments ignore the basic fact that several countries are firmly resolved to acquire some independent enrichment capability with or without US assistance. Moreover, there is every reason to expect they will be successful even if they have to pay a substantial premium in the process.

2. The knowledge required to produce plutonium is unclassified and is widespread and there are large quantities of plutonium throughout the world with more being created daily. Maintaining a restrictive policy in regard to our diffusion process would therefore not preclude any industrialized country seriously determined to do so, from producing a nuclear bomb.

3. The period of U.S. monopoly in the uranium enrichment field is rapidly drawing to a close. For the U.S. to remain aloof from foreign developments in this field will not turn back the technological clock, nor will it decrease for any meaningful period of time the risks of further weapons proliferation inherent in the continuing peaceful exploitation of the atom. Rather, it might result only in the forfeiture of an opportunity to use our present technological superiority in an effort to gain important economic and security benefits for the United States.

Whether the U.S. could actually gain a degree of control over the security arrangements of a cooperative venture that would justify releasing classified information to

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a group of foreign partners, and whether other countries can be induced to invest in a diffusion plant rather than continuing to concentrate their investment exclusively in the centrifuge field, are questions that can only be answered through serious negotiations with the countries concerned.

## V. Conclusion

A. After considering the foregoing three alternatives, we conclude that the first, namely, cooperation in the gaseous diffusion field would be preferable. This conclusion, however, is based on approval of the following negotiating strategy.

### B. Negotiating Strategy

#### 1. Timing

Subject to continuous review by the Department of State and the AEC, preliminary talks would begin in the early spring of 1970. By that time the Dutch, British and Germans will have a better idea of whether or how the tripartite centrifuge project may be expanded to include other countries. The effect of the project on the Community's enrichment plans and the effect that a US proposal might have on UK accession negotiations with the Community also should be clearer. Moreover, by the early months of 1970 the new German government will be in a better position to respond to a U.S. initiative, and Japan will probably have signed the NPT. Given the importance that the tripartite project has to the United Kingdom's accession interests, we would approach the United Kingdom before we approached our other prospective partners. We would, after preliminary discussions with the British, begin any initial consultations with the Commission of the European Communities.

Concurrently with our initial exploratory talks with the Europeans, the AEC will develop guidelines for possible royalties or similar payments for use, after appropriate coordination within the Executive Branch, should a negotiating phase follow the exploratory phase.

## 2. Approach

We should indicate in initial contacts that U.S. cooperation in the diffusion field is not conditioned upon European abandonment of research and development of the centrifuge process. We would stress that we believe cooperation in the diffusion field could be mutually advantageous and that it is worth serious study by the Europeans as one option they may want to consider in deciding upon an enrichment program.

The Europeans can be expected to inquire whether it is possible that future U.S. enrichment plants might involve the gas centrifuge and whether it would make sense for Europe to embark on a gaseous diffusion program if such a possibility exists. They may also ask whether the U.S. would be prepared to cooperate with them in centrifuge development either additionally or in place of the diffusion process. Should such questions arise, we would indicate that the USAEC has no current intention of bringing the centrifuge into commercial application in the U.S. prior to the late 1970's, that the USAEC's centrifuge program is developmental in nature, and that we are reluctant to cooperate with any countries in this field given the sensitivity of the technology. Moreover, we would stress that the diffusion process is the one most perfected technologically and that our offer represents the product of a major investment and of 25 years' experience. Further, we would point out that a U.S. option could be supplementary to European enrichment studies in the centrifuge field already under way and would in no way deprive them of the opportunity to assess the relative advantages of both techniques. We believe these are convincing arguments. If, however, our offer were rejected because centrifuge information is not included, or if the Europeans elected to pursue only the centrifuge route, we would have to review the situation in the light of these circumstances.

## 3. Other Countries

In the event other countries, particularly Japan, Australia, and Canada, express an interest either in associating themselves with a U.S.-European venture or

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exploring the possibility of some form of bilateral cooperation with the U.S., we would, as noted, indicate a willingness to hold preliminary exploratory conversations with them on how their long-term requirements for enriched uranium might best be met, with the understanding that the pre-conditions to U.S. assistance set forth in this paper would apply (recognizing that our preference for a multilateral arrangement may be unrealistic in the case of Canada).

We would be prepared to counter possible Soviet propaganda directed against the U.S. proposal by citing the constructive controls that would be inherent in a broadly-based, multi-national diffusion project.

If this general strategy were followed, subject, of course, to constant review by the Department of State and the AEC in response to developments abroad, an effort at cooperation along the lines recommended above would appear to be well worth trying. It would give allied countries an additional option to consider in making their enrichment plans. They could at worst reject that option and at best accept it as serving their interest. At the same time, by exploring the possibilities of cooperation the U.S. would in no way be bound to enter into a disadvantageous agreement if the negotiations did not prove fruitful from our point of view.

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ANNEX A

Based on various studies by EURATOM and FORATOM, it is considered most likely that if a diffusion plant were built in Western Europe for the production of enriched uranium, the first such plant would be in operation by about 1980 and would have an annual capacity of about 7,500 metric ton units of separative work (SW). If undertaken as a completely independent European effort, these same studies estimate a plant investment of between \$90 and \$130 per kilogram unit of SW per year; the latter figure is considered to be the most realistic. Thus, the investment -- exclusive of electrical generating and other support facilities -- would be in the order of \$975 million. It should be pointed out that these costs were determined largely by adjustments to the new plant costs shown in various published AEC documents rather than by independent estimates. Thus, we believe that the Europeans -- lacking the US experience and industrial base -- probably have underestimated the unit cost, for the initial plant at least, if it were undertaken exclusively on a European basis. Further, no research and development costs are included in the foregoing estimates. To bring existing European diffusion technology to the present US level, it has been estimated by FORATOM that the expenditure of \$100 to \$140 million would be required, with no assurance that parity would be reached.

Insofar as unit costs of separative work are concerned, by adjusting AEC data to European conditions, the Europeans have estimated that such costs for an independently built European plant would range between \$25 and \$37 per kilogram unit of separative work, with only operating and capital charges; they do not include items equivalent to the "added factor," interest on inventory or return on investment.

With US assistance, it is believed that the unit cost of investment could be reduced to about \$100 per kilogram unit of SW per year, or a total savings for the 7,500 metric ton unit plant of at least \$225 million. Furthermore, the \$100 to \$140 million in research and development expenditure would become unnecessary. If the diffusion plant were built in cooperation with the US, it is felt that the unit cost of separative work could be reduced from the \$33 figure to about \$25 per kilogram unit (based on European capital assumptions and electricity at 5 mills per kilowatt-hour.)

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ANNEX B - Current Foreign Enrichment Programs

1. France

France has a gaseous diffusion plant at Pierrelatte designed to produce enriched uranium for the Force de Frappe. The French have floated the idea on several occasions of developing a multilaterally financed European facility for the production of lightly enriched uranium. The Germans and other West Europeans to whom the proposal was addressed have not reacted enthusiastically. The French appear to be committed to diffusion technology and have publicly questioned the feasibility of the centrifuge process. They have had a modest R & D program underway in the centrifuge field with which, they apparently consider, they have had little success.

2. The United Kingdom, The Netherlands, and the FRG

In 1965 the British Government announced plans to modernize their diffusion plant at Capenhurst, primarily to meet increased civilian demand for nuclear fuel in the early 1970's. On the basis of economic considerations, the British have opted to expand their facilities beyond the modernization of Capenhurst through the development of the centrifuge process. Both the Germans and the Dutch have R & D programs in the centrifuge field. They have reached agreement with the British to pool their technology and resources in a tripartite project. In joining together they are motivated by political as well as economic considerations. The British particularly favor the project as a means of strengthening their ties to the Continent and as potentially helpful in eventual negotiations to enter the Common Market.

While France has remained aloof from the tripartite Project, both Italy and Belgium have indicated a strong interest in participating. The tripartite countries have agreed to consult with the Belgians and Italians and there have already been preliminary talks among the five countries.

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3. European Communities

The Commission of the European Communities has been interested for some time in a Community enrichment facility and is undoubtedly concerned by the tripartite development which threatens to read them out of European cooperation in this field. The Commission has recently proposed to the Council a three stage program to permit the Community to achieve a degree of self-sufficiency in the production of enriched uranium during the next decade. The program would include detailed studies and pilot projects on both the diffusion and the centrifuge processes drawing on French as well as German and Dutch experience in the enrichment field. It would attempt to begin production by the preferred process or combination of processes in the late 1970's.

4. Italy

Italy announced in November of this year that an Italian industrial firm has produced two prototype centrifuges. The Italian government has supported modest industrial research in the centrifuge since the beginning of 1969. It is not clear whether the centrifuge prototypes have actually been tested. There is reason to suspect that the Italian announcement was timed to fortify the Italian bid for membership in the tripartite centrifuge project.

5. Japan

Outside of Europe, Japan is engaged in serious research on diffusion and centrifuge technology with lesser efforts in other processes. While Japanese efforts appear to be favoring work in the centrifuge field, the Japanese Atomic Energy Agency has set 1975 as the target year for selection of a single process to be the basis of further efforts. The Japanese could probably accelerate this time table, however, if they felt that construction of a European enrichment facility posed a serious threat to their ability to compete in this field in the future.

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6. Australia

Australia started research on a gas centrifuge development program in 1960-61. In 1968 an official of the Australian Atomic Energy Commission told US officials that, based on their research, they believe a small, economically feasible system might be developed in four years time. The Australian program is aimed at achieving self-sufficiency in the production of nuclear fuel for their power reactor program and at the export market. They have evidenced a strong interest in cooperating with the US in this field.

7. Canada

Canada does not have an important R & D program underway in the enrichment field. They have, however, expressed an interest in cooperating with the United States in constructing a diffusion plant in the far Northwestern areas of Canada, where large supplies of natural uranium exist along with a large source of low cost hydro-electric power which would have no other marketing value.

8. Other Countries

In addition to the countries mentioned above, Sweden, Brazil, Israel, Yugoslavia, Egypt, India, Argentina and several others have evidenced varying degrees of interest in centrifuge research.

9. United States

It should be borne in mind that the United States is actively engaged in centrifuge research and is probably technically far ahead of any of the countries similarly engaged abroad.

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ANNEX C

NSA - 294

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April 20, 1964

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NATIONAL SECURITY ACTION MEMORANDUM 294

TO: The Secretary of State.  
The Secretary of Defense  
The Secretary of Commerce  
The Director of Central Intelligence  
The Administrator, National Aeronautics and  
Space Administration  
The Chairman, Atomic Energy Commission  
The Director, Office of Science and Technology

SUBJECT: U.S. Nuclear and Strategic Delivery System  
Assistance to France

It is the policy of this government to oppose the development of nuclear forces by additional states, other than those whose forces would be assigned as part of a NATO nuclear force, targeted in accordance with NATO plans and, except when supreme national interests were at stake, used only for the defense purposes of the Alliance.

Given current French policy, it continues to be in this government's interest not to contribute to or assist in the development of a French nuclear warhead capability or a French national strategic nuclear delivery capacity. This includes exchanges of information and technology between the governments, sale of equipment, joint research and development activities, and exchanges between industrial and commercial organizations, either directly or through third parties, which would be reasonably likely to facilitate these efforts by significantly affecting timing, quality or costs or would identify the U.S. as a major supplier or collaborator. However, this directive is not intended to restrict unduly full and useful cooperation in non-strategic programs and activities.

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Therefore, the President has directed that effective controls be established immediately to assure that, to the extent feasible, the assistance referred to above is not extended either intentionally or unintentionally.

To this end, specific technical guidance is to be developed and issued at the earliest possible time for the use of the agencies that control the export of equipment and technology, including data exchange arrangements. Responsibility for the development of such guidance, and when necessary the revision of these guidances, will be vested in the Departments of State and Defense, in consultation as appropriate with the Department of Commerce, the Central Intelligence Agency, the National Aeronautics and Space Administration, the Atomic Energy Commission, and the Office of Science and Technology, and under the leadership of the Department of State. The approved guidance documents will be cleared at the White House and issued as technical appendices to this National Security Action Memorandum. Necessary guidance will be requested before specific commitments are made by any agency.

*McGeorge Bundy*  
McGeorge Bundy

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THE WHITE HOUSE  
WASHINGTON

March 9, 1965

9/13/34  
F. C.  
NSAM  
3-94

Dear Tommy:

I have held your letter of February 26 about NSAM 294 until we could have a first meeting with the two Secretaries on the Gilpatric Report. In the light of our discussion of yesterday, I now think we should clearly go ahead on the basis which is suggested in the memorandum enclosed with your letter. My one additional suggestion is that I hope a White House Staff Officer may also be included in the NSAM Review Group under State chairmanship. I would expect to nominate Spurgeon Keeny for this job.

Sincerely,

*ma*

McGeorge Bundy

The Honorable Llewellyn Thompson  
Acting Deputy Under Secretary  
Department of State

C O P Y

SECRET

February 26, 1965

Dear Mac:

You will recall that we had set up a small working group to look into some of the coordination and implementation aspects of NSAM 294. I enclose a preliminary report of the group.

Their findings and views as to continued application of the policy set forth in the NSAM seem to me to square with the consensus reached in the White House meeting of December 30 as recorded in the January 14 memorandum sent to participants in the meeting. We all recognize that we are feeling our way in a singularly complex area, and the approach suggested by the working group is in my view a sound one.

I believe we should proceed along these lines, and plan to ask the other agencies concerned to designate representatives to the Review Group proposed. In the Department of State, general NSAM 294 responsibility will continue to rest with the Deputy Assistant Secretary for Politico-Military Affairs, Mr. Jeffrey C. Kitchen, and he or an officer designated by him will represent the Department on the Review Group.

Sincerely,

Clearances:

Llewellyn E. Thompson  
Acting

G/PM - Mr. Kitchen  
Mr. Meyers

Enclosure:

Report of Working Group.

The Honorable  
McGeorge Bundy,  
Special Assistant to the President  
The White House.

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CONCLUSIONS AND RECOMMENDATIONS OF NSAM 294 WORKING GROUP

Conclusions:

1. The purpose of the policy set forth in NSAM 294 is to use export denial, as one means of achieving effective control over material, equipment and technology which any nation\* seeks to acquire for use in an independent nuclear weapons/strategic delivery vehicle program, and which would significantly benefit such program.

2. Adequate legislative authority and export control mechanisms already exist within the U.S. Government to assure that all items of potential concern in NSAM 294 terms come within the cognizance of the appropriate export licensing authorities, either AEC, State, or Commerce.

3. The tasks of the licensing authorities are therefore (1) to make sure that procedures are in effect which are adequate to identify all proposed export items falling under NSAM 294 and (2) to establish the best possible judgment on the following:

- a. The technical, economic, quality, and timing importance of the item to the national weapons program.
- b. The use actually intended for the item.
- c. The alternative sources outside the U.S. for the item or a comparable substitute.

4. Those items

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\* In practical terms, the U.K. is at present exempted from this policy, since we are cooperating with that country extensively in both the nuclear weapons and delivery vehicle areas. The policy is also not relevant to Bloc countries, since more stringent policies are governing with respect to them.

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4. Those items which are clearly intended for use in a national program, would significantly and directly benefit that program in terms of timing, quality, or cost, and are unavailable in comparable substitute form elsewhere than the U.S. are to be denied.

5. Those items intended for other uses, or of only marginal benefit to the national program, or available elsewhere than the U.S. without undue difficulty or delay, will normally be approved. Other than NSAM 294 considerations may come into play, however (Atomic Energy legislation, Nuclear Test Ban Treaty, political considerations, other U.S. policies, etc.), and individual decisions must take these into account.

6. While NSAM 294 is of general application, France, under her present policies, is the major target country now and for the immediate future. Nevertheless exports to all other countries must be continuously evaluated in terms of both the potential and intention of the recipient country to engage in a national program.

7. No new control mechanisms or formalized inter-agency committees are required, but improved coordination, exchange of views and centralized compilations of case-by-case experience are needed. To the extent feasible, definite lists of commodities and related technologies of importance in NSAM 294 terms should be developed in order to make the controls most effective. The agencies with technical competence in the area are therefore continuing to work on improving present lists. It is recognized, however, that the relative and shifting nature of the NSAM 294 control problem probably means that individual decisions will necessarily continue to be mostly of an ad hoc nature.

Recommendations:

1. Each

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- 3 -

1. Each agency concerned (State, Defense, AEC, Commerce, NASA) should name a single senior staff level representative to have general responsibility within that agency for NSAM 294 matters.

2. These representatives should keep in close touch with each other and with all concerned areas within their own agencies, the purpose being to ensure that NSAM 294 cases arising within or referred through normal channels to their agencies get adequate and expeditious consideration under the criteria outlined above.

3. These representatives should also be constituted as an informal NSAM 294 Review Group, meeting under State chairmanship once a month or as necessary, and including additional participation from their own agencies as desirable. The purpose will be to continue to explore ways and means to improve inter-agency coordination, discuss implementation problems which may have arisen, study decisions reached in individual cases of a precedent value or with unusual features, build up a central body of NSAM 294 experience, and make recommendations for change in policy or procedures to their respective agencies as may be required.

4. The intelligence community should be requested to provide the Review Group on a regular basis with evaluations of additional-country potential and intention to engage in nuclear weapons programs, to assist the group in achieving the purpose mentioned in paragraph 6 above.

Clearances:

cc:

Commerce - Mr. Tollin  
Defense - Mr. Nichols  
AEC - Mr. O'Donnell  
NASA - Mr. Gorman  
MC - Mr. Sipes  
E/MDC - Mr. McFadden

WE - Mr. Beigel  
L/ EUR - Mr. Trippe  
CIA - Mr. Christesen

G/PM: SGeorge: fm

2/17/65

## NATIONAL SECURITY COUNCIL

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March 24, 1970

MEMORANDUM FOR DR. KISSINGER

FROM: Robert M. Behr *RMB*SUBJECT: Joint Committee on Atomic Energy (JCAE) Request for  
NSC/USC Report on International Cooperation in the  
Enrichment Field

The Joint Committee on Atomic Energy has been advised, presumably by AEC and/or State, of the existence of the report which has been forwarded to the President for decision on cooperation in the uranium enrichment field.

Representative Hosmer informally requested a copy of the report, less the Under Secretary's memorandum and recommendation to the President. Representative Holifield, Chairman of the Committee, has followed through with a letter to the Secretary of State officially requesting the report.

State informally requested permission to release the report to the Joint Committee. We informed State that the request should be denied at this time (1) because we believe that reports which are submitted to the President as part of recommendations for decision should not be floated beforehand in Congress, and (2) because we find the report, as it stands, unsatisfactory in the sense that it is an advocacy paper for a particular option rather than a balanced presentation of all the options.

State is politely declining Chairman Holifield's request. We think the matter may be turned off only for the time being. In order to keep this issue in hand while it is under consideration, we are stressing that the matter should be closely held. This does not preclude a balanced version of the report being released to the Committee at a later date.

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THE UNDER SECRETARY OF STATE  
WASHINGTON

NSC UNDER SECRETARIES COMMITTEE

*Mrs. Davis  
FYI*

*1009490 ✓*

CONFIDENTIAL

April 20, 1970

NSC-U/SM 56B


TO: The Deputy Secretary Defense  
The Assistant to the President for National  
Security Affairs  
The Director of Central Intelligence  
The Chairman of the Joint Chiefs of Staff  
The Chairman, Atomic Energy Commission  
The Director, U.S. Arms Control & Disarmament Agency  
The Science Advisor to the President  
The Assistant Director, Bureau of the Budget

INFO: The Director, United States Information Agency

SUBJECT: Request for Additional Information on Uranium  
Enrichment Problem

The attached memorandum from Henry Kissinger is self-explanatory. The Chairman has asked Herman Pollack, Director, Scientific and Technological Affairs, Department of State, to organize the preparation of answers to the questions posed.

Because of the classification problem as we move more deeply into consideration of the status of centrifuge technology it may be necessary to limit sharply the access to the supplementary information which has been requested. Please call Dr. Robert Loftness, Deputy Director for Technology of the Office of Atomic Energy Affairs in SCI (Ext. 22432), to give him the name of the contact point for your Agency concerning future developments on this study.

  
Arthur A. Hartman  
Staff Director

Attachment:

As stated.

S/S# 5756

NATIONAL SECURITY COUNCIL  
WASHINGTON, D.C. 20506

CONFIDENTIAL

April 16, 1970

MEMORANDUM FOR

CHAIRMAN, NSC UNDER SECRETARIES COMMITTEE

SUBJECT: Program for International Cooperation in the Uranium  
Enrichment Field

The President has noted the NSC Under Secretaries Committee's recommendation regarding a program for international cooperation in the uranium enrichment field as proposed in your memorandum of February 26, 1970.

Before further action on this matter is undertaken, the report should address the following questions.

1. Since the report recognizes that United States policy on the gas centrifuge process may have to be reviewed, depending upon the reactions of other countries to the proposed course of action, what are the full advantages and disadvantages of the option to share both centrifuge and diffusion technology? Could the United States offer to share diffusion technology now, but accompany the offer with a straightforward commitment to consider sharing centrifuge technology at a later date? What are the relevant Congressional (JCAE) attitudes bearing upon the options?
2. What objectives of the United States — for example, technological cooperation with Europe and other countries, European integration, multinational approaches, non-proliferation, influence in the uranium enrichment field — are to be served or disserved by the options? What is the likelihood of advancing the various objectives and what are the relationships between them?
3. What are the short-range and probable longer-term problems, and possible United States responses, which may be generated by a decision of the United States to share only gaseous diffusion technology?

CONFIDENTIAL

4. Where does the United States stand in its diffusion and centrifuge technology and programs? What are likely future trends? What is the probable status of other countries' programs over the years without United States cooperation, and what is the interaction between their programs and those of the United States? Specifically, what are the international and domestic political implications of the recommended course of action if the United States should decide that its next enrichment plant is to be of the centrifuge type?

It is recognized that timing may be an important factor in reviewing these options. The above information, therefore, should be submitted for the President's consideration on or before May 18. The classification of the report should be up-graded if necessary to handle the supplementary information adequately. The nature and content of the review should be closely held.

  
Henry A. Kissinger

4/5 m 55

NATIONAL SECURITY COUNCIL  
WASHINGTON, D.C. 20506

SECRET

September 14, 1970

MEMORANDUM FOR

ACTING CHAIRMAN, NSC UNDER SECRETARIES COMMITTEE

SUBJECT: Proposed Program of International Cooperation in the Uranium Enrichment Field

The President has considered the recommendation of the NSC Under Secretaries Committee, as contained in your memorandum of February 26, 1970 and reaffirmed in your memorandum of April 26, 1970, regarding a program of international cooperation in the uranium enrichment field.

The President has approved, subject to appropriate prior consultations with the Joint Committee on Atomic Energy, exploratory talks with the Commission of the European Communities, the member States of EURATOM, and the United Kingdom on the possibility of the United States assisting in the construction of a multinationally owned and operated gaseous diffusion plant to be located in Western Europe.

Additionally, the President has decided that the United States will be prepared, if requested, to discuss the possibility of similar cooperation with other friendly countries, particularly Japan, Canada and Australia.

The President has noted and approved in principle the negotiating strategy submitted by the NSC Under Secretaries Committee. He has also noted that the United States would insist that any related enrichment facilities and their products would be subject to meaningful safeguards and adequate security controls, and that the United States would give preference to multilateral control and ownership.

The President has approved the recommendation of the NSC Under Secretaries Committee subject to the following qualifications:

- The United States position should not be presented as a major cooperative program conditioned upon a continuing United States voice and participation in the actual management of any facilities.
- The United States shall be prepared not to hold back any technology in the gaseous diffusion process.

SECRET

SECRET

- Regarding any information on the United States gas centrifuge program, it should be stated only that there is no authorization to discuss the gas centrifuge program and that the United States Atomic Energy Commission's gas centrifuge program is developmental in nature.
- The United States position on sharing of diffusion technology should not be represented to the Joint Committee on Atomic Energy as a means of impeding foreign gas centrifuge development. This development, especially in Europe, is an ongoing program and would probably not be curtailed by an offer to share diffusion technology unless the economics of the diffusion process were markedly more advantageous.

Noting that the NSC Under Secretaries Committee will report the results of these talks together with further recommendations as soon thereafter as possible, the President has additionally requested interim reports on the consultations with the Joint Committee on Atomic Energy and on the initial discussions with the United Kingdom.

  
Henry A. Kissinger

cc: The Chairman, Atomic Energy Commission

SECRET

Secretariat

Tab B is now  
signed

## THE WHITE HOUSE

WASHINGTON

November 23, 1970

SECRET/EYES ONLY

Dear Alex:

Please excuse this tardy reply to your letter of September 1, 1970, expressing concern about the foreign policy aspects of the United States uranium enrichment capacity available for supplying nuclear power programs in other countries.

I agree that an inability to enter into discussions for long-term advance planning of power needs of other countries could limit our influence on programs abroad. However, related to this issue of uranium enrichment capacity will be the European response, and possibly the reaction of other allies, to the exploratory talks which the President has authorized on the prospects for our cooperating and assisting in the construction of a multinational diffusion plant in Europe.

Moreover, as you know, the question of additional United States uranium enrichment capacity involves a host of interrelated foreign policy and domestic issues. There is the President's decision that the supply of nuclear fuel should ultimately be met by the private sector to the degree possible. It is my understanding that the primary issue is not whether the United States will expand its capacity, but how and when additional capacity is to be constructed. I understand further that there are alternative courses for expanding our capacity and that these alternatives, after examination of their technical, economic and other aspects, will be forwarded to the President for decision.

Because the question of United States uranium enrichment capacity involves several important foreign policy aspects, the Under Secretaries Committee is being requested to conduct a review of

SECRET/EYES ONLY

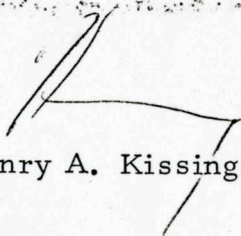
SECRET/EYES ONLY

2

whether the United States should continue to make further commitments regarding the supply of nuclear fuel to other countries and, if so, under what conditions should these commitments be made.

Please keep in touch on this matter.

Warmest regards,



Henry A. Kissinger

The Honorable  
U. Alexis Johnson  
Under Secretary for Political Affairs  
Department of State

SECRET/EYES ONLY

Secretariat

21661

Split package - Dr. K signed Tab A only  
which is ready for dispatch. The rest  
of the package went back for his signature  
on Tab B (ltr to Alexis Johnson)

nancy 11/20

21661

NATIONAL SECURITY COUNCIL  
WASHINGTON, D.C. 20506

SECRET/LIMDIS/NOFORN

November 20, 1970

MEMORANDUM FOR

CHAIRMAN, UNDER SECRETARIES COMMITTEE

SUBJECT: Review of United States Policy on Meeting Additional Foreign Requirements for Enriched Uranium

Anticipating that future demand for enriched fuel to supply reactors scheduled for construction in the United States and abroad by about 1973 will fully commit the current United States uranium enrichment capacity, the President has directed that the NSC Under Secretaries Committee conduct a review of United States policy on additional commitments to supply enriched uranium for foreign power programs.

Specifically, the Under Secretaries Committee should address the questions (1) of whether the United States should continue to make further commitments to supply enriched uranium to other countries and (2) if so, under what conditions should such commitments be made. This review should consider the relationships of United States foreign policy objectives (1) to the President's decision regarding the ultimate goal of having the supply of nuclear fuel transferred to the private sector to the degree possible, and (2) to the President's decision authorizing exploratory talks with EURATOM, the United Kingdom and, if requested, with other allies such as Japan, Canada and Australia on the possibility of the United States cooperating and assisting in the construction of a multinational gaseous diffusion plant abroad.

SECRET/LIMDIS/NOFORN

This review, accompanied by the relevant advantages and disadvantages of alternative courses of action and the recommendations of the Under Secretaries Committee, should be submitted to the President by January 1, 1971.

  
Henry A. Kissinger

SECRET/LIMDIS/NOFORN

MEMORANDUM FOR

CHAIRMAN, UNDER SECRETARIES COMMITTEE

SUBJECT: Review of United States Policy on Meeting Additional Foreign Requirements for Enriched Uranium

Anticipating that future demand for enriched fuel to supply reactors scheduled for construction in the United States and abroad by about 1973 will fully commit the current United States uranium enrichment capacity, the President has directed that the NSC Under Secretaries Committee conduct a review of United States policy on additional commitments to supply enriched uranium for foreign power programs.

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SECRET/LIMDIS/NOFORN

RH:jlj 11/17/70 rewritten page one of Action 21661 Tab A

SECRET / LIMDIS / NOFORN

- 2 -

This review, accompanied by the relevant advantages and disadvantages of alternative courses of action and the recommendations of the Under Secretaries Committee, should be submitted to the President by January 1, 1971.

Henry A. Kissinger

P. 2 Rewrtn:RH:ms:11/16/70

SECRET / LIMDIS / NOFORN

Secretariat

I would ordinarily retype these and not send them back - but the package has to be cleared with Mr. Sonnenfeldt and the exercise might have been for nothing. nancy 11/13

- ① Correction at clip
- ② Retype letter at TAB B
- ③ Clear with Sonnenfeldt

MEMORANDUM

ACTION - 21651

NATIONAL SECURITY COUNCIL

SECRET/SENSITIVE/EYES ONLY

November 12, 1970

MEMORANDUM FOR DR. KISSINGER

FROM: Robert M. Behr *RMB*

SUBJECT: Issue Paper and Further Action on Under Secretary Johnson's Letter re US Uranium Enrichment Capacity

Under Secretary Johnson has expressed (Tab C) concern about the foreign policy aspects (1) of the approaching inadequacy of the US uranium enrichment capacity, and (2) our concomitant inability to enter into discussions now for additional long-term commitments to meet the fuel supplies of other countries.

Mr. Johnson maintains it is important that we make a firm commitment to increase our capacity (that is when the Administration reviews AEC's FY 1972 budget proposal). He solicits your support on this point.

Per your request (Tab D), below is a summary of the issue. At Tab A is a proposed memorandum requesting the Under Secretaries Committee to look into the foreign policy aspects of this issue. At Tab B is a revised reply to Mr. Johnson reflecting this action.

Background and Issue

Though currently operating below capacity, US gaseous diffusion plants are expected to meet domestic and foreign requirements for nuclear fuel only until the late 1970's at which time additional US or foreign capacity will be required.

Current US capacity is not now over-committed as AEC's policy has been to balance our commitments to long-term foreign demand within our existing production capacity and domestic requirements. The problem, expressed in Mr. Johnson's letter, is that we may be unable to accept additional commitments to supply new foreign reactors because of our failure to define and budget for increased US enrichment capacity.

The central issue is not whether an expansion is necessary but rather how and perhaps who should build the additional capacity.

SECRET/SENSITIVE/EYES ONLY

*11/16/70*  
*DONE*  
*Read down direction*  
*+ give till Jan. DONE*

The AEC and the Joint Committee on Atomic Energy (JCAE) preference is to expand US enrichment capacity through an expensive (circa \$800 million) improvement and upgrading program for existing diffusion facilities. Moreover, they would hope to delay any new European plant based on US technology until after the full utilization of US capacity had been achieved.

*Whe is that*  
*(PETER FLANIGAN, WILL KREIGSMAN)*  
The White House staff view is that it is premature to settle now on one particular course. In light of the President's decision that the supply of nuclear fuel should ultimately be met by the private sector rather than the Government, there is a concern that AEC's expansion program would leave these facilities in federal hands up through this decade because of the added increment of capital investment associated with a diffusion improvement program. Moreover, the White House staff points out that AEC's proposed expansion program is not the only way to increase our current capacity and that other courses (for example, a less efficient use of raw uranium but with greater product output, or pre-production of enriched nuclear fuel since the plants are now operating below capacity) may be more amenable to a possible transfer of facilities to the private sector.

*Whe is*  
From a foreign policy standpoint, the issue relates to the President's decision to conduct exploratory talks with our European allies in EURATOM and the UK on the possibility of the US assisting in the construction of a gaseous diffusion plant in Western Europe. The White House staff believes that a European decision to build a facility soon would afford us the options of (1) delaying the costly program to improve our existing diffusion plants, and (2) evaluating fully the potential of the gas centrifuge technique. We are currently at a sensitive stage in the consultations with the JCAE on this decision, and will not inform the Europeans of our willingness to engage in such talks until these consultations are completed (probably in early December). We are, moreover, not at all certain of the Committee's support for the Administration's readiness to discuss a program of sharing with selected allies. *(FLANIGAN, KREIGSMAN)*

There is a host of related issues overlapping domestic and foreign policy considerations. For example, under current practice, we commit ourselves to supply fuel for the lifetime (about 30 years) of a reactor whereas the country which has an agreement of cooperation with us may cancel its order with three years notice. Needless to say this is a sore point with the Joint Committee where there is concern that the US could be left with unused and expensive production capacity should the cancellation option be widely exercised.

In order to assist in the evaluation of the full range of alternatives for expanding our enrichment capacity, I believe that the Under Secretaries

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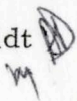
Committee should review the bases of our current and future commitments to fulfill foreign demand. In short, to what extent and under what conditions should we respond positively to foreign requests for additional US commitments?

However, the selection of a specific domestic program for increasing our enrichment capacity appears to me to be a matter more appropriately handled in the budget process and outside NSC channels. This matter is now undergoing intensive review within the Executive Office of the President.

At Tab A is a memorandum to the Chairman of the Under Secretaries Committee requesting the review described above. At Tab B is a revised letter to Mr. Johnson which informs him of this action.

RECOMMENDATIONS:

1. That you sign the memorandum for the Chairman of the Under Secretaries Committee at Tab A.
2. That you sign the reply to Mr. Johnson at Tab B.

Concurrence: Helmut Sonnenfeldt 

SECRET/SENSITIVE/EYES ONLY



10880

DEPARTMENT OF STATE  
WASHINGTON

September 1, 1970

CONFIDENTIAL

Dear Henry:

We are concerned about foreign policy aspects of the approaching exhaustion of U.S. uranium enrichment capacity available for supplying civilian power reactors in other countries. We believe these aspects should be carefully weighed when the Administration reviews, in connection with the Fiscal Year 1972 Budget, proposals for improving the output of the AEC's gaseous diffusion facilities.

Although these facilities are currently operating below full capacity, it is anticipated that future commitments to supply enriched fuel for reactors firmly scheduled for construction here and abroad by 1973 will commit our total capacity. Accordingly, in negotiating bilateral nuclear cooperation agreements, we are committing ourselves to provide fuel only for reactors on which construction can be scheduled to start before the end of that year.

Since this is a long lead-time industry, our inability to enter into discussions on a realistic basis for long-term advance planning of power needs of other countries threatens both to limit our influence in civil reactor programs abroad and to become a serious deterrent to U.S. exports in this field.

The Honorable  
Henry A. Kissinger,  
Assistant to the President  
for National Security Affairs,  
The White House.

CONFIDENTIAL

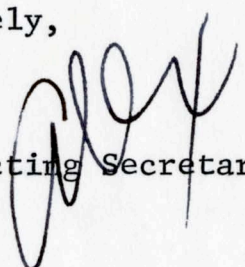
This situation could lead to major losses from a balance of payments standpoint. Moreover, it could adversely affect our non-proliferation objectives. Other countries would have increased incentive to proceed with wholly independent uranium enrichment capabilities, whereas we may hope to limit or influence this by improving our own capacity and by proceeding with the cooperative steps outlined in the Under Secretaries Committee's memorandum of February 26, 1970, for the President. Other countries could also be encouraged to turn to natural uranium reactors, which are more troublesome from the standpoint of proliferation.

We are not, of course, in a position to endorse specific budgetary requests that the AEC may submit. However, for the foregoing reasons, it is important that the U.S. make a firm commitment to enhance our capacity to meet constantly increasing requirements, and it is on this basic point that we are soliciting your support.

I am sending a copy of this letter to George Shultz so that the Office of Management and Budget may also be aware of the Department's interest in this matter.

With all best wishes,

Sincerely,

  
Acting Secretary

cc: Mr. Shultz

CONFIDENTIAL

NATIONAL SECURITY COUNCIL

CONFIDENTIAL/SENSITIVE

September 17, 1970

MEMORANDUM FOR DR. KISSINGER

FROM: Robert M. Behr

*RMB*

*FOR REDO PER HAK NOTE  
Give me a staff  
paper on this issue*

SUBJECT: Reply to Under Secretary Johnson's Letter on Uranium Enrichment

*The note to please pass the memo  
to the Admin. Sec. is doing. Let's  
sign in U/Secy Committee  
for study*

Under Secretary Alexis Johnson has written you (Tab B) expressing concern about the foreign policy aspects of the approaching exhaustion of US uranium enrichment capacity for supplying power reactors in other countries. The main points of his letter are:

- Anticipated future commitments to supply nuclear fuel for reactors scheduled for construction here and abroad by 1973 will commit our total enrichment capacity.
- Our inability to enter into discussions for long-term advance planning of power needs of other countries threatens to limit both our influence on programs abroad and our exports.
- This could lead to major losses from a balance of payments standpoint and could adversely affect our non-proliferation objectives by increasing incentives abroad to proceed with wholly independent uranium enrichment capabilities.
- We hope to influence the situation by improving our own capacity and by proceeding with the cooperative steps with allies as recommended by the Under Secretaries Committee.
- Though State is not in a position to endorse specific AEC budgetary requests, it is important that we make a firm commitment to increase our capacity (that is, when the Administration reviews the FY 1972 budget proposals for improving AEC's gaseous diffusion facilities).
- He solicits your support on this point.

*OCT 7 1970*

Wittingly or not, Mr. Johnson has allowed himself to become an advocate for AEC/JCAE (Joint Committee on Atomic Energy) views regarding US enrichment policy that do not jibe with those of the domestic side of the White House staff.

CONFIDENTIAL/SENSITIVE

The AEC/JCAE preference is to expand US diffusion capacity through an expensive upgrading of existing facilities, while delaying a new European plant based on US technology until after the full utilization of US capacity has been achieved.

The White House staff view is that it is not yet the time to settle on one particular course. For example, a European decision to build a facility soon would afford us the options of (1) delaying the costly program to improve our existing diffusion plants, and (2) evaluating fully the potential of the gas centrifuge technique. The White House staff is also considering, on a highly confidential basis, alternative methods of expanding plant capacity without the expenditure of large amounts of Federal funds.

Since these options are under study at the present time, I recommend that you avoid a commitment to support the views expressed by Under Secretary Johnson.

I have drafted a proposed reply (Tab A) to Under Secretary Johnson which thanks him for his letter and states that (1) the Administration is carefully examining the technical, economic and international factors with respect to decisions in this area, and (2) related to this examination will be the European response to the exploratory talks on possible cooperation in the construction of a European diffusion plant.

RECOMMENDATION:

That you sign the letter at Tab A.

Concurrences: Peter Flanigan  
James Schlesinger  
Helmut Sonnenfeldt



THE WHITE HOUSE  
WASHINGTON

NSC  
STATIONERY

SECRET/LIMDIS/NOFORN

MEMORANDUM FOR

~~THE~~ CHAIRMAN <sup>S</sup>  
~~NSC~~ UNDER SECRETARIES COMMITTEE

SUBJECT: Review of United States Policy on Meeting  
Additional Foreign Requirements for  
Enriched Uranium

Anticipating that future demand for enriched fuel to supply reactors scheduled for construction in the United States and abroad by about 1973 will fully commit the current United States uranium enrichment capacity, the President has directed that the NSC Under Secretaries Committee conduct a review of United States policy on additional commitments to supply enriched uranium for foreign power programs.

Specifically, the Under Secretaries Committee should address the questions (1) of whether the United States should continue to make further commitments to supply enriched uranium to other countries and (2) if so, under what conditions should such commitments be made. This review should consider the relationships of United States foreign policy objectives (1) to the President's decision regarding the ultimate goal of having the supply of nuclear fuel transferred to the private sector to the degree possible, and (2) to the President's decision authorizing exploratory talks with EURATOM, the United Kingdom and, if requested, with other allies such as Japan, Canada and Australia on the possibility of the United States cooperating and assisting in the construction of a multinational gaseous diffusion plant abroad.

SECRET/LIMDIS/NOFORN

SECRET/LIMDIS/NOFORN

- 2 -

This review, accompanied by the relevant advantages and disadvantages of alternative courses of action and the recommendations of the Under Secretaries Committee, should be submitted to the President by December 15, 1970.

Henry A. Kissinger

SECRET/LIMDIS/NOFORN

NATIONAL SECURITY COUNCIL CORRESPONDENCE ROUTING AND CONTROL PROFILE

NUMBER 21661 MO 09 DA 02 HR 09

DOCUMENT SOURCE/CLASS/DESCRIPTION

TO: PRES \_\_\_\_\_ FROM: ELIOT \_\_\_\_\_ CLASSIF: U \_\_\_\_\_ EXDIS  
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DOC DATE: \_\_\_\_\_ SUBJECT: Request how US's Firm commitment to enhance our capacity to provide Uranium Power Reactors to other Nations  
s/s 10880  
 ENCLOSURES: ( \_\_\_\_\_ ) NOT XEROXED FOR SUSPENSE FILE \_\_\_\_\_

SECRETARIAT DISTRIBUTION/ACTION

INTERNAL ROUTING AND DISTRIBUTION				ACTION REQUIRED	
NAME:	ACTION	INFO	RCD CY	MEMO FOR HAK	
ADVANCE CYS TO <u>HAK HAIG</u>		<u>X</u>	FOR:	MEMO TO PRESIDENT	( _____ )
STAFF SECRETARY				REPLY FOR HAK SIGNATURE	( _____ )
DIR, SECRETARIAT		<u>X</u>		REPLY FOR PRES SIGNATURE	( _____ )
SUB-SAHARAN AFRICA				MEMO TO _____	( _____ )
NR EAST/NORTH AFRICA				RECOMMENDATIONS	( _____ )
EUROPE/CANADA				JOINT MEMO	( _____ )
LATIN AMERICA				APPROPRIATE ACTION	( _____ )
UNITED NATIONS				ANY ACTION NECESSARY	( _____ )
ECONOMIC				CONCURRENCE	( _____ )
SCIENTIFIC	<u>X</u>			DUE DATE: <u>09/05</u>	INIT <u>NSM</u> DATE <u>11/25</u>
PLANNING GROUP				COMMENTS: (Including Special Instructions)	
PROGRAM ANALYSIS				ORIG) NSC _____	
<u>Kennedy</u>		<u>X</u>		TO ) PAF <u>✓</u>	
				WHC _____	
				SUBF _____	

INTERNAL ROUTING

DATE	FROM	TO	ACTION REQUIRED
09/17/70	Behr	HAK	sign ltr to Johnson
10/6	NSC/s	Behr	redo
11/12	Behr	HAK	sign memo to Chairman USC
11/12	HAK	<del>Behr</del>	redo/clear with S' field.
11/13	Behr	to NSC/s to HAK	Sign memo to Johnson, Chmn of USC
11-20	HAK	NSC/s	- Tap A only - for dispatch
11-23	HAK	NSC/s	HAK signed to A. Johnson - Tap B signed to A. Johnson

DISPOSITION

DISPATCH: LETTER/MEMO \_\_\_\_\_  
 NOTIFY: \_\_\_\_\_  
 COPIES: (AS MARKED ABOVE) \_\_\_\_\_

NSC ✓ STAFF APPROVAL  
 PAF ✓ HAK APP'L  
 WHC ✓ HAK MARGINALIA  
 SUBF ✓ NS3 FORM REQUIRED

NATIONAL SECURITY CORRESPONDENCE ROUTING AND CONTROL PROFILE

NUMBER MO DA HR

21421 8 19 18

DOCUMENT SOURCE/CLASS/DESCRIPTION

TO: PRES \_\_\_\_\_ FROM: ELIOT \_\_\_\_\_ CLASSIF: U **ALSO** EXDIS  
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 \_\_\_\_\_ PARIS MTG  
 \_\_\_\_\_ NO FORN

**11568 + 10773**

DOC DATE: 8/19 Behr

SUBJECT: Proposed Program for Cooperation in The Uranium Enrichment Field with US allies

ENCLOSURES: ( ) ( ) NOT XEROXED FOR SUSPENSE FILE

INTERNAL ROUTING AND DISTRIBUTION

NAME:	ACTION	INFO	RCD CY FOR:
ADVANCE CYS TO HAK/HAIG			
STAFF SECRETARY			
DIR, SECRETARIAT			
SUB-SAHARAN AFRICA			
NR EAST/NORTH AFRICA			
EUROPE/CANADA			
LATIN AMERICA			
UNITED NATIONS			
ECONOMIC			
SCIENTIFIC			
PLANNING GROUP			
PROGRAM ANALYSIS			
FAR EAST			

**ACTION REQUIRED**

MEMO FOR HAK ..... ( )

MEMO TO PRESIDENT ..... ( )

REPLY FOR HAK SIGNATURE ..... ( )

REPLY FOR PRES SIGNATURE ..... ( )

MEMO \_\_\_\_\_ TO \_\_\_\_\_ ( )

RECOMMENDATIONS ..... ( )

JOINT MEMO ..... ( )

APPROPRIATE ACTION ..... ( )

ANY ACTION NECESSARY ..... ( )

CONCURRENCE ..... ( )

DUE DATE: \_\_\_\_\_

COMMENTS: (Including Special Instructions)  
 See also 10773 + 11568 for prior info

INTERNAL ROUTING

DATE	FROM	TO	ACTION REQUIRED
8/19	Behr	HAK	Pres for decision
8/28	HAK	Behr	Redo
8/28	Behr	HAK	Pres for decision
9/8	Hak	Pres	Decision
9/12	<del>HAK</del>	Davis	appropriate action (dispatch N55M of Memo to NSC/USC)

MICROFILM DATA  
 DO ✓  
 INIT DATE 9/18  
 ORIG) NSC  
 TO ) PAF  
 WHC  
 SUBF ✓

DISPOSITION

DISPATCH: LETTER/MEMO \_\_\_\_\_

NOTIFY: \_\_\_\_\_

COPIES: (AS MARKED ABOVE)

NSC \_\_\_\_\_ STAFF APPROVAL  
 PAF \_\_\_\_\_ HAK APP'L  
 WHC \_\_\_\_\_ HAK MARGINALIA  
 SUBF X X NS3 FORM REQUIRED

TO: PRES X FROM: ELIOT \_\_\_\_\_  
 HAK \_\_\_\_\_ ROGERS \_\_\_\_\_  
 LAIRD \_\_\_\_\_  
 DOC DATE: 10/20/70 Johnson, U

CLASSIF: U \_\_\_\_\_ EXDIS \_\_\_\_\_  
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 SENSITIVE \_\_\_\_\_  
 PARIS MTG \_\_\_\_\_  
 NO FORN \_\_\_\_\_

SUBJECT: XX European collaboration with French on uranium enrichment plant

ENCLOSURES: ( ) ( ) NOT XEROXED FOR SUSPENSE FILE \_\_\_\_\_

INTERNAL ROUTING AND DISTRIBUTION

NAME: BEHR

ADVANCE CYS TO HAK/HAIG		ACTION	INFO	RCD CY FOR:
STAFF SECRETARY				
DIR, SECRETARIAT				
SUB-SAHARAN AFRICA				
NR EAST/NORTH AFRICA				
EUROPE/CANADA				<u>X</u>
LATIN AMERICA				
UNITED NATIONS				
ECONOMIC				
SCIENTIFIC				<u>X</u>
PLANNING GROUP				<u>X</u>
PROGRAM ANALYSIS				<u>X</u>

ACTION REQUIRED

MEMO FOR HAK . . . . . ( )

MEMO TO PRESIDENT . . . . . ( )

REPLY FOR HAK SIGNATURE . . . . . ( )

REPLY FOR PRES SIGNATURE . . . . . ( )

MEMO TO \_\_\_\_\_ ( )

RECOMMENDATIONS . . . . . ( )

JOINT MEMO . . . . . ( )

APPROPRIATE ACTION . . . . . ( )

ANY ACTION NECESSARY . . . . . ( )

CONCURRENCE . . . . . ( )

DUE DATE: 11/5

COMMENTS: (the Including Special Instructions)

INTERNAL ROUTING

DATE	FROM	TO	ACTION REQUIRED
11/04	Behr/ Sonnen	HAK	Information
11/13	NSC/S	Behr/Sonnenfeldt	Behr: memo to Johnson: co: Sonnenfeldt Sonnenfeldt: substance on French Deal cc:Behr
11/14	BEHR	HAK	Sign memo to Johnson
11/23	HAK	NSC/S	HAK signed letter to U Johnson / Dispatched
11/25	NSC/S	HAK	REOPEN/Decision
12/28	HAK	<del>BEHR</del> Behr	redo
3/19	HAK	HAK	see memo to Johnson (3/23)

INTERNAL/INTERIM ROUTING

DATE	FROM	TO	S	ACTION REQUIRED	CY TO
3/23	Behr/HAIG	HAIG	X	Decision (3/25)	
4/3	Behr/Behr	Behr	S	Finals Action / w/ Behr 4/4	
4-5-71	BEHR	CUHIA			
4/13/71	Behr/Behr	HAIG	X	Sign memo to Johnson 04/15	NS4
4/14	Behr/Behr	NSC/S	S	clearance (4/14)	CNO
4/14	NSC/S	HAIG	X	initial memo to Behr 04/19	

DISPOSITION

CROSS REF WITH \_\_\_\_\_ NOTIFY \_\_\_\_\_ DATE \_\_\_\_\_

SEE LOG \_\_\_\_\_ DISPATCH: LETTER/MEMO \_\_\_\_\_

JOINED BY LOG \_\_\_\_\_ COPIES: (AS MARKED ABOVE) \_\_\_\_\_

SPECIAL FILE RQMT: \_\_\_\_\_ SA, \_\_\_\_\_ HP, \_\_\_\_\_ HM

SPECIAL DISPOSITION COMMENTS: \_\_\_\_\_

SUSPENSE CY ATTACHED: YES \_\_\_\_\_ NO \_\_\_\_\_

MICROFILM DATA

DO \_\_\_\_\_ INIT \_\_\_\_\_ DATE \_\_\_\_\_

ORIG) NSC \_\_\_\_\_ PAF \_\_\_\_\_ WHC \_\_\_\_\_

TO ) \_\_\_\_\_ SUBF \_\_\_\_\_

THE WHITE HOUSE  
WASHINGTONCONFIDENTIAL/SENSITIVE

April 20, 1971

MEMORANDUM FOR: GEORGE P. SHULTZ

FROM: HENRY A. KISSINGER *K*

SUBJECT: Uranium Enrichment

You will recall that, on 14 September 1970, the President authorized exploratory talks with EURATOM, the United Kingdom and other allies on the possibility of our cooperating in the construction of a multi-national uranium enrichment plant utilizing US gaseous diffusion technology. Action on this decision was subject to appropriate consultations with the Joint Committee on Atomic Energy (JCAE).

Discussions to date with the JCAE have led to an impasse. I understand the committee refuses to endorse our international cooperation proposal until there is a commitment by the Administration to fund the cascade improvement program (CIP) for existing US plants.

It is my understanding that you are currently conducting a review of the Administration's position on the CIP issue. The matter has acquired some important international overtones which I should like to bring to your attention in order that they may be appropriately factored into your review.

The Europeans and other allies (particularly Japan, Canada and Australia) know that the President has authorized discussions on a cooperative international approach and that the Administration is currently consulting with the JCAE. The delay resulting from JCAE opposition serves to reinforce their doubts and questions regarding US intentions in the uranium enrichment field. Their doubts are, moreover, coupled with a desire for a certain independence from outside energy sources.

There has, therefore, been a flurry of actions by the Europeans and others including, for example, (1) an announcement by France that it plans to construct a gaseous diffusion plant with eventual participation open to other European countries; (2) a French agreement with the USSR for the latter to supply toll enrichment services; (3) inquiries from Japan regarding our

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intentions and possible cooperation in a Japanese program; (4) an announcement by South Africa that it intends to construct a uranium enrichment plant based upon an as yet unrevealed technology; and (5) rumours of various other dealings. Also, the fourth Geneva conference on peaceful uses of atomic energy is coming up in September, and it is expected that both official discussion and corridor talk will focus on uranium enrichment.

From the international standpoint, if we are to continue our leadership in this area and hopefully influence developments toward a mutually beneficial rationalization of uranium enrichment plans, we have no time to lose regarding initiation of discussions with our allies. In view of the long production lead-times and the time required for such negotiations, our allies need to know our intentions soon for planning purposes.

I am fully aware of your desire to avoid commitments which would prejudice future budget decisions. However, I believe the above international considerations should be appropriately factored into your present reassessment of our position and the other related issues.

Moreover, I would suggest that this reassessment be completed at the earliest practicable date in order that we know where we stand and can decide on the options open to us regarding foreign cooperation. If the alternative is further delay, from an international view we may wish to proceed to exploratory talks with our allies without the JCAE's blessing.

I would appreciate being informed of your conclusions. Colonel Robert M. Behr will be handling this matter for me.

cc: John Ehrlichman  
Edward David

MEMORANDUM

NATIONAL SECURITY COUNCIL

ACTION 23247

CONFIDENTIAL/SENSITIVE

April 12, 1971

MEMORANDUM FOR: DR. KISSINGER

FROM: ROBERT M. BEHR/HELMUT SONNENFELDT

SUBJECT: Breaking the Log Jam re Cooperation with Allies in the Uranium Enrichment Field

*Handwritten:* [Signature] **TRAIL** **11/16** **RMB** **KS/AD**

Per your request (Tab B), below is a discussion of how we might break the log jam caused by the Joint Committee on Atomic Energy's (JCAE) refusal to endorse our proposal to explore with our allies possible cooperation in a multinational gaseous diffusion plant.

Background. AEC recently appeared before the JCAE to discuss again uranium enrichment issues, including the President's decision authorizing talks with EURATOM and other allies on possible cooperation.

The JCAE position remained firm: i. e., no endorsement of the sharing proposal without Administration commitment to the cascade improvement/cascade uprating programs (CIP/CUP) for the three US plants. CIP/CUP would cost the government at least \$200-\$800 M over 5 or more years. AEC's plan would cost \$800 M and increase plant capacity by 50%. The JCAE strongly favors early initiation of CIP.

APR 20 1971

The Administration considers commitment to CIP unnecessary for now as plant capacity can be increased for the near-term by altering plant operating conditions. Mr. Shultz had informed Dr. Seaborg that (1) the Administration is not prepared to spend in FY 1971 or 1972 the \$16 M already appropriated for CIP at congressional initiative, and (2) no commitment could be given now to initiation of CIP in the FY 1973 budget. However, OMB is undertaking a reassessment of the Administration's position on these subjects.

We understand that Mr. Holifield would consider the Administration's release of the \$16 M sufficient evidence of a commitment to CIP. (These funds would be used for the procurement of long lead-time items.)

Will Kriegsman (Domestic Council staff) would oppose releasing the \$16 M at this time unless it could result in a quid pro quo, (e. g., withdrawal of Mr. Holifield's opposition to the President's government reorganization proposals). From the domestic standpoint, the primary benefit in our remaining uncommitted to CIP/CUP is to use this "lever" to gain support for other proposals. (This presupposes OMB approves CIP; if it does not, the

*Handwritten:* internal & implementation

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*Handwritten:* I signed the memo - but generally I prefer indicating factors

political trade-offs would have to be even greater.) Will Kriegsman also believes that proceeding on the CIP/CUP may not be entirely consistent with the President's desire to transfer uranium enrichment functions to the private sector at some future date.

Breaking Out of the Log Jam. There are two approaches to this impasse. In brief, you could now ensure that relevant international factors are considered in OMB's reassessment of the CIP/CUP issue. If OMB's review confirms the decision that deferral of CIP/CUP is economically or otherwise correct, we could then consider "bucking the JCAE."

"Bucking the JCAE" means initiating discussions with foreign countries without the Committee's blessing. There is no procedural requirement by which civil, as contrasted with military, cooperative agreements can be overruled by the JCAE unless, of course, Congress passes a new law. But, the JCAE holds hearings on agreements, is consulted often by AEC before negotiations to avoid direct confrontation over a fully negotiated document, and frequently exercises its will through extra-legal pressures.

Also, the JCAE would likely make life more difficult in implementing an agreement which had not received its blessing earlier. Thus, the absence of its blessing could lessen the attractiveness to other countries of our initiative. (If it became necessary to consider this option, methods of avoiding difficulties would deserve serious study.) "Bucking the JCAE" is the more difficult option and, though not necessarily unrealistic, we view it only as a possible last resort measure if no way out of the log jam appears.

For now, we believe the best course is to inform Mr. Shultz (proposed memorandum at Tab A) that you hope (1) international considerations (outlined in your memorandum) will be appropriately factored into OMB's reassessment of the Administration's position on CIP; and (2) OMB's reassessment can be completed soon as we have no time to lose from the international standpoint. (Your memorandum does not, however, prejudge the CIP issue.)

We have coordinated this matter at the staff level with the Domestic Council, OST and OMB. *JOHN LEHMAN CONCURS.*

RECOMMENDATION:

That you initial the memorandum for Mr. Shultz at Tab A.

THE WHITE HOUSE

WASHINGTON

ACTION 23247

SECRET/SENSITIVE

April 2, 1971

MEMORANDUM FOR:

ROBERT M. BEHR  
HELMUT SONNENFELDT

THROUGH: JEANNE DAVIS

FROM: RICHARD T. KENNEDY

On the attached package HAK has gone along on your recommendation that we continue the present course for now. However, he would like to have an immediate memorandum explaining how we can break out of the log jam caused by the deal Congress is demanding and the resistance of the domestic staff. HAK has indicated that he is willing to take on the domestic staff if necessary, but wants to know how and where we go from here so as to speed things up.

SECRET/SENSITIVE

## NATIONAL SECURITY COUNCIL

SECRET/SENSITIVE

March 23, 1971

MEMORANDUM FOR: DR. KISSINGER

FROM: ROBERT M. BEHR *RMB*  
HELMUT SONNENFELDT *H*

SUBJECT: French Proposal to Cooperate in Gaseous  
Diffusion Study

Background

In September (1970), the President authorized exploratory talks with EURATOM, the UK and, if requested, with other allies, on the possibility of US assistance in the construction of a multinational gaseous diffusion plant. Action on this was subject to the appropriate Congressional (Joint Committee on Atomic Energy/JCAE) consultations.

There were initial discussions of the plan with the JCAE during the last Congress, but no action was taken because the JCAE wanted more detail and full committee review.

In his annual foreign policy report (February 25, 1971), the President announced that the Administration has undertaken consultations with the JCAE concerning ways in which we might assist our allies to construct a multinational uranium enrichment plant to help meet future world demands. Though there had been press speculation both here and abroad regarding this decision, we are now on the record.

The JCAE considered the sharing proposal again on March 18 in executive session and in the context of the overall uranium enrichment question: i. e., present US capacity will not meet domestic and foreign demand through the 1975-1985 time period. The JCAE earlier threatened to withhold endorsement of the President's sharing proposal until the Administration agrees to fund the AEC's \$500-\$800 million improvement program (CIP/CUP) for existing plants. According to a debrief on the recent session, the JCAE position remains firm: no endorsement without Administration commitment to the CIP/CUP program. The FY 1972 budget has no funds for the expansion program. However, the Administration has committed itself to provide the product necessary to meet US demand and even additional commitments to foreign programs for the next year. Mr. Schultz has

SECRET/SENSITIVE

written Chairman Seaborg that though no funds for the improvement program are included in the 1972 budget, the \$16.1 million added by Congress in 1971 will remain in OMB reserve.

We understand Mr. Holifield would consider the Administration's release of this \$16.1 million as sufficient evidence of an Administration commitment to AEC's plant expansion program. However, these funds are for long leadtime items, or the first step in a \$500-\$800 million program, and, according to Will Kriegsman, the domestic side of the White House would oppose any such bargain with Mr. Holifield unless it could result in a quid pro quo such as withdrawal of Holifield's opposition to the President's organizational proposals.

Mr. Schultz has also informed AEC that "there is at this time no intention to refuse to accept domestic or foreign orders for enrichment services." However, OMB believes our production capacity should be increased for the present by such methods as raising the amount of U-235 in the "tails" or discarded waste rather than by an expensive plant expansion. Accepting a higher percentage of U-235 as waste would allow our plants to process more material because the final stages of the processing effort extract relatively small quantities of U-235.

The Europeans know the President has authorized discussions on a cooperative approach and that the Administration is in consultations with the JCAE. They question longer-term US intentions regarding future supply and the delay reinforces their doubts. There has therefore been a flurry of actions by the Europeans to solve the longer-term problem by reducing as substantially as possible European dependence on outside energy sources (including Middle East oil).

### French Proposal

With regard to the French proposal for bilateral cooperation in a technical and economic feasibility study for a gaseous diffusion plant in Europe (presumably under EURATOM), we gave you (Tab B) two options:

- Agree to a bilateral study with the French; or
- Continue along present course toward exploratory talks with EURATOM, its member states and the UK, combined with a special approach to the French (i. e., while we would commit ourselves to close consultations with the French, we would not bind ourselves to any bilateral arrangement).

SECRET/SENSITIVE

You leaned (Tab B, Page 2) toward a bilateral study with the French, but within the framework of Option 2, our exploratory talks with EURATOM. Presumably this means talking with EURATOM about a community project and simultaneously conducting a bilateral study with the French. You requested a memorandum for the President's decision on this matter.

In the meantime:

- There has been no action regarding our approach to EURATOM in light of the requirement for Congressional consultations.
- French officials have told the Australians that France plans to construct a new diffusion plant for nuclear power fuel in France, though construction in Australia could not be excluded, and also made clear the French interest in "joint" but not "multinational" ownership (Tab C).
- France has announced (Tab D) its decision to go ahead with a feasibility study for a diffusion plant with eventual participation open to Western European countries.
- France has contracted for Soviet supply of uranium enrichment services, though down playing this "small contract" and noting its intention to continue buying US enriched uranium (Tab E).

We recommended against a bilateral study with the French primarily on the grounds that it could (1) seriously complicate if not undermine our approach to EURATOM, and (2) easily be considered a direct siding with France against the UK-Dutch-German centrifuge effort.

In light of recent events, we still feel that we should avoid being distracted from our course now by a bilateral study with the French. We agree with Brussels (Tab F) that time is of the essence if we are to assure that our quasi-monopoly in supplying nuclear fuel is replaced by a mutually beneficial rationalization of production capacity and market structures. The alternative to a US initiative may be a chaotic, uncoordinated spate of European enrichment efforts, possibly accompanied by a weakening of safeguards.

A bilateral study with France could well contribute to rationalizing plans with Paris and it would help currently bruised US-French relations. But enriched uranium supply is very much a "community" concern shared among many Europeans. Therefore, we believe our first priority is to get along with our Congressional consultations and begin discussing this matter in a European context. This would not preclude consideration of possible bilateral approaches at a later date.

However, if, in the light of recent adverse developments in US-French relations, you still prefer to forward this matter to the President recommending a bilateral study with the French, we suggest it best to have the benefit of the Under Secretaries Committee's views since the Committee (1) initially recommended the cooperative approach to EURATOM, and (2) has the responsibility for implementing the President's "go ahead". At Tab A is a memorandum requesting the Committee's views on the French proposal and our options. There should be no trouble in meeting the short time fuse for the USC report.

RECOMMENDATION:

That for the present we continue along our course toward discussions with EURATOM, its member States and the UK on a rationalization of the problem in a multinational context.

APPROVE

DISAPPROVE

SEE ME

Alternatively:

1. If you wish the USC's views on the French proposal before forwarding it for the President's decision, the memorandum at Tab A requests a USC report.
2. If you wish to forward the French proposal for the President's decision now without the benefit of the USC's views, the memorandum for the President at Tab A (1) sets forth the options with their advantages and disadvantages and recommends that he approve a bilateral arrangement with the French.

Attachments

SECRET/SENSITIVE

MEMORANDUM

3/23

NATIONAL SECURITY COUNCIL

23247

ACTION

SECRET/SENSITIVE

March 19, 1971

MEMORANDUM FOR: DR. KISSINGER

FROM: ROBERT M. BEHR *RMB*  
HELMUT SONNENFELDT *[Signature]*

SUBJECT: French Proposal to Cooperate in Gaseous Diffusion Study

Background

In September (1970), the President authorized exploratory talks with EURATOM, the UK and, if requested, with other allies, on the possibility of US assistance in the construction of a multinational gaseous diffusion plant. Action on this was subject to the appropriate Congressional (Joint Committee on Atomic Energy/JCAE) consultations.

There were initial discussions of the plan with the JCAE during the last Congress, but no action was taken because the JCAE wanted more detail and full committee review.

In his annual foreign policy report (February 25, 1971), the President announced that the Administration has undertaken consultations with the JCAE concerning ways in which we might assist our allies to construct a multinational uranium enrichment plant to help meet future world demands. Though there had been press speculation both here and abroad regarding this decision, we are now on the record.

The JCAE, now under Senator Pastore rather than Representative Holifield, considered the sharing proposal again yesterday (March 18) in executive session and in the context of the overall uranium enrichment question: i. e., present capacity will not meet domestic and foreign demand through the 1975-1985 time period. The JCAE earlier threatened to withhold endorsement of the President's sharing proposal until the Administration agrees to fund the AEC's \$500-\$800 million improvement program (CIP/CUP) for existing plants. According to preliminary debrief on yesterday's session, the JCAE position remains firm: no endorsement without Administration commitment to the CIP/CUP program. (Mr. Holifield was in the chair.)

SECRET/SENSITIVE

The FY 1972 budget has no funds for the expansion program. However, the Administration has committed itself to provide the product necessary to meet US demand and even additional commitments to foreign programs for the next year. Mr. Schultz has written Chairman Seaborg that though no funds for the improvement program are included in the 1972 budget, the \$16.1 million added by Congress in 1971 will remain in OMB reserve. Moreover, "there is at this time no intention to refuse to accept additional domestic or foreign orders for enrichment services. Whatever steps are necessary will be taken to assure that enriching capacity is available to meet these commitments."

The Europeans know what is going on and question US intentions regarding future supply. There has therefore been a flurry of actions by the Europeans to solve the longer-term problem by reducing as substantially as possible European dependence on outside energy sources (including Middle East oil).

#### French Proposal

With regard to the French proposal for bilateral cooperation in a technical and economic feasibility study for a gaseous diffusion plant in Europe (presumably under EURATOM), we gave you (Tab B) two options:

- Agree to a bilateral study with the French; or
- Continue along present course toward exploratory talks with EURATOM, its member states and the UK, combined with a special approach to the French (i. e., while we would commit ourselves to close consultations with the French, we would not bind ourselves to any bilateral arrangement).

You leaned (Tab B, Page 2) toward a bilateral study with the French, but within the framework of Option 2, our exploratory talks with EURATOM. Presumably this means talking with EURATOM about a community project and simultaneously conducting a bilateral study with the French. You requested a memorandum for the President's decision on this matter.

In the meantime:

- There has been no action regarding our approach to EURATOM in light of the requirement for Congressional consultations.
- French officials have told the Australians that France plans to construct a new diffusion plant for nuclear power fuel in France,

though construction in Australia could not be excluded, and also made clear the French interest in "joint" but not "multinational" ownership (Tab C).

- France has announced (Tab D) its decision to go ahead with a feasibility study for a diffusion plant with eventual participation open to Western European countries.
- France has contracted for Soviet supply of uranium enrichment services, though down playing this "small contract" and noting its intention to continue buying US enriched uranium (Tab E).

We recommended against a bilateral study with the French primarily on the grounds that it could (1) seriously complicate if not undermine our approach to EURATOM, and (2) easily be considered a direct siding with France against the UK-Dutch-German centrifuge effort.

In light of recent events, we still feel that we should avoid being distracted from our course now by a bilateral study with the French. We agree with Brussels (Tab F) that time is of the essence if we are to assure that our quasi-monopoly in supplying nuclear fuel is replaced by a mutually beneficial rationalization of production capacity and market structures. The alternative to a US initiative may be a chaotic, uncoordinated spate of European enrichment efforts, possibly accompanied by a weakening of safeguards.

A bilateral study with France could well contribute to rationalizing plans with Paris and it would help currently bruised US-French relations. But enriched uranium supply is very much a "community" concern shared among many Europeans. Therefore, we believe our first priority is to get along with our Congressional consultations and begin discussing this matter in a European context. This would not preclude consideration of possible bilateral approaches at a later date.

However, if, in the light of recent adverse developments in US-French relations, you still prefer to forward this matter to the President recommending a bilateral study with the French, we suggest it best to have the benefit of the Under Secretaries Committee's views since that Committee (1) initially recommended the cooperative approach to EURATOM, and (2) has the responsibility for implementing the President's "go ahead". At Tab A is a memorandum requesting the Committee's views on the French proposal and our options. There should be no trouble in meeting the short time fuse for the USC report.

RECOMMENDATION:

That for the present we continue along our course toward discussions with EURATOM, its member States and the UK on a rationalization of the problem in a multinational context.

Alternatively:

1. If you wish the USC's views on the French proposal before forwarding it for the President's decision, the memorandum at Tab A requests a USC report.
2. You wish a memorandum for the President's decision on the French proposal now without the benefit of the USC's views \_\_\_\_\_.

Attachments

THE WHITE HOUSE

WASHINGTON

SECRET/EXDIS

MEMORANDUM FOR

CHAIRMAN, NSC UNDER SECRETARIES COMMITTEE

SUBJECT: French Proposal to Cooperate in Gaseous  
Diffusion Feasibility Study

In order that the French proposal for a bilateral economic and technical feasibility study regarding a gaseous diffusion plant in Western Europe can be presented to the President for his consideration, the NSC Under Secretaries Committee should conduct an analysis of the proposal and the alternative responses open to us with their relevant advantages and disadvantages. Meanwhile, however, this project should in no way slow up the process of going forward with the President's decision regarding the necessary Congressional consultations on exploratory talks with EURATOM and the UK on the possibility of our cooperating in the construction of a multinational gaseous diffusion plant.

The fact and purpose of this review should be closely held with limited distribution. The report and recommendations of the Under Secretaries Committee should be forwarded for consideration by the President not later than April 22, 1971.

Henry A. Kissinger

SECRET/EXDIS

THE WHITE HOUSE  
WASHINGTONSECRET/SENSITIVE

MEMORANDUM FOR: THE PRESIDENT

FROM: HENRY A. KISSINGER

SUBJECT: French Proposal to Cooperate in Uranium  
Enrichment Program

Background

In September, 1970, you authorized exploratory talks with EURATOM, its member States (Belgium, France, Germany, Italy, Luxembourg, the Netherlands), the UK and, if requested, with other allies on the possibility of assisting in the construction of a multinational gaseous diffusion plant to help meet future world demand for enriched uranium to fuel nuclear power reactors. Action on this was subject to appropriate consultations with the Joint Committee on Atomic Energy (JCAE).

Initial consultations were held with the JCAE last Congress, but the Committee requested more detail and full committee review before any overtures were made to the Europeans.

The JCAE recently considered the sharing proposal in executive session in the context of the overall uranium enrichment question: i. e., present US capacity will not meet domestic and foreign demand through the 1975-1985 time period. As Alex Johnson reported to you, the JCAE position remains firm that they will not endorse the sharing proposal without some commitment to AEC's \$500-\$800 million improvement program for existing plants. This is in spite of the fact that we were already committed to provide the product necessary to meet US demand and some additional commitments to foreign programs by alternative means during FY 1972. State and AEC are now acting to remove this impasse.

The Europeans know you have approved a cooperative approach and that we are now in consultations with the JCAE. They question the longer-term US intentions regarding future supply and the delay with the JCAE reinforces their doubts. There has been a flurry of actions by the Europeans to solve the longer-term problem by reducing as substantially as possible European dependence on outside energy sources (including US enriched uranium and Middle East oil).

SECRET/SENSITIVE

French Proposal

Ambassador Lucet has approached me with a proposal (memorandum attached) for US-French bilateral cooperation in a technical and economic feasibility study for a gaseous diffusion plant in Europe (presumably tied in with EURATOM).

There are two options:

Option 1. Agree to a bilateral study with the French.

The principal advantage in this approach would be the political benefits of accommodating the French at a time when our relations are bruised by such matters as our refusal to give COCOM approval for France to sell integrated circuit technology to Poland.

A bilateral project would have definite practical advantages for the French by enabling them to update their diffusion technology. More advanced technology or an additional facility would put them in a better commercially competitive position vis-a-vis the UK-Dutch-Germany centrifuge effort and the UK's diffusion technology.

On the other hand, a bilateral arrangement could reduce our flexibility in structuring a broader EURATOM agreement. It would also complicate and possibly undermine our planned initiative regarding exploratory talks with EURATOM and other multinational cooperative efforts in the diffusion area.

Moreover, such a bilateral arrangement might appear in the eyes of other EURATOM members as a direct challenge to the ongoing UK-Dutch-German centrifuge development effort, and would not necessarily contribute to a mutually beneficial rationalization of production capacity and market structures within the "community" context.

We would gain little in technological terms from such a project with France. Also, we can expect stronger opposition from the JCAE toward a bilateral deal than they have exhibited toward our proposed multinational project.

Option 2. Continue along present course toward exploratory talks with EURATOM, its member States and the UK, combined with a special approach to the French.

This option would have the advantage of avoiding the pitfalls mentioned above of a bilateral arrangement, but would not preclude

SECRET/SENSITIVE

close consultations with the French as we approach EURATOM and the other members. This option also would not preclude consideration of possible bilateral approaches at a later date depending upon the outcome of the discussions with EURATOM regarding a multinational effort.

On the other hand, turning down France's offer for a joint feasibility study could exacerbate our already bruised relations. In fact, France has announced its decision to go ahead with a feasibility study with or without us and with eventual participation open to Western European countries.

RECOMMENDATION:

In the light of recent adverse developments in US-French relations, I recommend that we accept the French proposal for a joint feasibility study. Our action in this regard would, of course, be subject to Congressional consultations.

If you approve, I will inform State and AEC of your decision in order that the necessary consultations and planning can begin.

Approve Bilateral with France \_\_\_\_\_

Disapprove Bilateral, Continue along Present Course in  
Multinational Context \_\_\_\_\_

See Me \_\_\_\_\_

Paris, March 16, 1970

*Work with  
Sennefeldt*MEMORANDUMOutlook for Franco-American Cooperation  
in the Field of Isotope Separation

The rapidly increasing construction of nuclear power plants using enriched uranium as fuel for the production of electricity naturally leads the European countries to give thought to their future supply of this fuel. The idea has therefore developed in various quarters that additional facilities for the separation of isotopes could be installed in Europe. Recent initiatives have confirmed that trend of thought. In the late Spring of 1969, the Common Market Commission recommended that this problem should be approached on an European Economic Community basis ; the President of the French Republic expressed his interest in the matter on the occasion of the Conference at The Hague ; and the French Minister of Foreign Affairs developed the concept further on March 6, 1970, at Brussels. On the other hand, three of the European countries - Great Britain, The Netherlands and the Federal Republic of Germany - have decided to pool their efforts to develop the ultracentrifuge process.

Unlike the British Government, which has ceased to manifest any interest in the gaseous diffusion method, the French Government is continuing its research in this method, in the belief that it can still be greatly improved. The experience acquired by the Americans in this field is very wide, while that of the French is more limited although far from negligible ; it is more than likely that discussion by both countries of their own experience might prove to be fruitful for both of them.

In this spirit, American and French authorities could undertake a technical and economical study intended to show the feasibility of a plant for isotope separation by gaseous diffusion capable, in particular, of supplying the European market, the capital and operating costs to be appraised on the basis of prevailing economic conditions in Western Europe. A study of this kind, if its results proved to be positive, could then serve as a basis for the joint preparation of a project for the construction of a plant which would quite naturally come within the scope of the common actions provided for in the EURATOM treaty.

Under these conditions, the output of the plant would be subject to official controls to ensure its use for peaceful purposes. Its location in France would provide all the necessary assurances as to the preservation of technological secrets relating to the design of the plant and the production of its essential parts.

## NATIONAL SECURITY COUNCIL

SECRET/SENSITIVE

November 25, 1970

MEMORANDUM FOR DR. KISSINGER

FROM: Robert M. Behr/Helmut Sonnenfeldt

SUBJECT: Recommended Course Re Handling French Proposal  
to Cooperate in Gaseous Diffusion Study

You will recall that Helmut Sonnenfeldt, at your request (Tab A), asked (Tab B) the French Ambassador about the apparent difference in the note he left with you on April 13 and the subsequent French approach to State on the matter of cooperation on a gaseous diffusion plant. Lucet said to you that he had proposed bilateral cooperation in a technical and economic feasibility study, which could then serve as a basis for a joint US/French proposal to EURATOM. The resulting project would be under EURATOM. The French overture to State was put, at the outset, in the context of a multinational arrangement.

Lucet said the French are still awaiting our response. There are essentially two alternatives:

Option 1. Agree to bilateral study with French.

The only advantage we see in this approach would be the political gesture of accommodating the French.

On the other hand, a bilateral arrangement could reduce our flexibility in structuring a broader EURATOM agreement. In the event of a joint proposal, we would have to reach agreement with the French on all of the basic terms before approaching EURATOM. This approach could complicate our initiative regarding exploratory talks with EURATOM. Moreover, it might appear in the eyes of other EURATOM members as a direct challenge to the ongoing (UK-German-Dutch) centrifuge development effort.

Option 2. Continue along present course toward exploratory talks with EURATOM and the UK, combined with a special approach to the French.

While this option would not accommodate the French proposal made to you, it would avoid the pitfalls of a strictly bilateral arrangement and would not preclude a "special" approach to the French as we approach EURATOM and the other members.

SECRET/SENSITIVE

As soon as consultations with the Joint Committee are completed, we intend to approach EURATOM and its member states. We would apprise the French that this matter has been under study within the US Government for some time and we agree with France (1) that US-European cooperation in a multinational diffusion plant is worthy of serious consideration and that (2) EURATOM would provide a good framework for such possible cooperation. We would also mention that we attach importance to close cooperation with the French as this undertaking evolves in Europe.

We think it best to avoid at this time any hints that we are considering a special, exclusive bilateral study with the French. (The President's decision proceeded along the basis that any approach to Europe would be multilateral, not bilateral. The multilateral approach we have now in mind would be consistent with the line the French took at State.) Moreover, we should not advise the French of our decision to approach EURATOM until consultations with the Joint Committee are completed.

RECOMMENDATION:

We recommend against a special bilateral approach with the French. We believe we should respond to the French proposal as outlined in Option 2 above when we are ready to begin exploratory talks. In the meantime, if asked about proposed bilateral cooperation, we should respond only that the whole subject of uranium enrichment policy is still under study within the US Government.

Approve Recommended Course \_\_\_\_\_

Disapprove Recommended Course \_\_\_\_\_

Prepare Memorandum for President's Decision \_\_\_\_\_ *PK*

*I lean towards bilateral study with French in Option 2 framework of*



Department of State

TELEGRAM

CONFIDENTIAL 062

PAGE 01 VIENNA 01196 251506Z

53-42  
ACTION SCI-03

FILE

INFO OCT-01 IO-04 NSC-10 NSCE-00 INR-07 CIAE-00 NSAE-00  
EUR-12 EA-18 ACDA-10 SS-20 RSR-01 RSC-01 /087 W  
043074

R 251407Z FEB 71  
FM AMEMBASSY VIENNA  
TO SECSTATE WASHDC 2675  
INFO AEC GERMANTOWN 2159  
AMEMBASSY PARIS  
AMEMBASSY CANBERRA  
USMISSION EC BRUSSELS

CONFIDENTIAL VIENNA 1196

LIMDIS

IAEA

SUBJ: FRENCH INTEREST IN INTERNATIONAL COOPERATION FOR URANIUM  
ENRICHMENT

1. IN CONVERSATION WITH GLENNAN, TIMBS (AUSTRALIAN AEC) (PROTECT SOURCE), WHO HERE FOR MEETING BOARD GOVERNORS, VOLUNTEERED REPORT ON HIS AND ALAN WILSON'S RECENT VISIT PIERRELATTE GASEOUS DIFFUSION PLANT.
2. TIMBS AND WILSON WERE GIVEN RED CARPET TREATMENT AT ALL STAGES, CULMINATING IN DISCUSSION SUBJECT WITH GIRAUD, IN PRESENCE CURIEN, WHO HAS REPLACED JACQUES MARTAIN IN FOREIGN MINISTRY.
3. AT PIERRELATTE, THEY WERE SHOWN "EVERYTHING EXCEPT THE BARRIER" IN THREE OF FOUR SECTIONS OF PLANT, INCLUDING TOP. THIRD SECTION (5 TO 20 PERCENT U-235) WAS AVAILABLE FOR VISIT AS WELL IF VISITORS INTERESTED. TIMBS DESCRIBED PLANT AS BEAUTIFULLY AUTOMATED AND WAS OBVIOUSLY IMPRESSED WITH ENTIRE SHOW, ESPECIALLY SERIOUS INTEREST FRENCH.

CONFIDENTIAL



Department of State

TELEGRAM

CONFIDENTIAL

PAGE 02 VIENNA 01196 251506Z

4. FRENCH INFORMED TIMBS THEY PLANNED BUILD NEW GASEOUS DIFFUSION PLANT FOR PRODUCTION POWER REACTOR FUEL. NEW PLANT PROPOSED BE BUILT IN FRANCE, BUT COULD BE BUILT IN AUSTRALIA OR OTHER SUITABLE FOREIGN COUNTRY OFFERING ADEQUATE SUPPLY URANIUM AND OTHER CONDITIONS SUCH AS AVAILABILITY POWER AT REASONABLE COST.
5. FRENCH INTERESTED IN JOINT OWNERSHIP PLANT, BUT NOT RPT NOT IN MULTINATIONAL OWNERSHIP. WHEN TIMBS RAISED QUESTION RE POSSIBILITY JAPAN AS THIRD PARTY, FRENCH SAID THEY HAD NO OBJECTION JAPANESE PUTTING UP PART OF CAPITAL TO BE REPAID BY FUTURE DELIVERIES OF PRODUCT, BUT APPARENTLY WOULD NOT RPT NOT BE INTERESTED IN JAPANESE VOICE IN MANAGEMENT.
6. PLANNED PLANT TO HAVE CAPACITY SIX MILLION UNITS SEPARATIVE WORK. CAPITAL COST WOULD BE GUARANTEED NOT RPT NOT EXCEED \$110 PER UNIT AND COULD BE AS LOW AS \$90.
7. ACCORDING TO FRENCH, COST OF SEPARATIVE WORK, WITH AMORTIZATION AND DEPRECIATION AT 18 PERCENT, INCLUDING INTEREST AT 8 PERCENT, AND POWER (2500 MW) AT 6 MILLS PER KWH, WOULD BE ABOUT \$25, WITH MAXIMUM OF \$27.50 PER KILOGRAM.
8. TIMS SAID WOULD BE DELIGHTED MAKE SIMILAR VISIT TO US. HE DEPARTS VIENNA FOR AUSTRALIA FRIDAY AFTERNOON. GLENNAN

CONFIDENTIAL



Department of State

TELEGRAM

LIMITED OFFICIAL USE 747

PAGE 01 PARIS 04012 121858Z

50  
ACTION SCI-06

INFO: OCT-01 EUR-20 IO-13 ACDA-19 CIAE-00 INR-08 L-04  
NSAE-00 NSC-10 OST-01 RSC-01 SS-20 H-02 RSR-01 P-03  
PRS-01 USIA-12 /122 W  
..... 034222

R 121752Z MAR 71  
FM AMEMBASSY PARIS  
TO SECSTATE WASHDC 7468  
INFO AMEMBASSY BONN  
AMEMBASSY BRUSSELS  
AMEMBASSY THE HAGUE  
AMEMBASSY LUXEMBOURG  
AMEMBASSY ROME  
USMISSION EC BRUSSELS UNN  
AEC GERMANTOWN UNN

LIMITED OFFICIAL USE PARIS 4012

SUBJECT: GOF ANNOUNCES FEASIBILITY SURVEY OF GASEOUS DIFFUSION PLANT

REF: STATE 40402

1. FRENCH PRESS MARCH 11 AND 12 CARRIED REPORTS OF PRESS CONFERENCE MARCH 11 AT PIERRELATTE BY FRENCH ATOMIC ENERGY ADMINISTRATOR GENERAL GIRAUD WHERE LATTER ANNOUNCED GOF DECISION TO GO AHEAD

WITH FEASIBILITY STUDY OF GASEOUS DIFFUSION ENRICHMENT PLANT OF 5 TO 6 MILLION UNITS CAPACITY COSTING 3 TO 3.5 BILLION FRANCS (\$540 - \$630 MILLION) AND CONSUMING ABOUT 2.4 MILLION KILOWATTS. STUDY WILL BE PERFORMED BY TECHNIP, ENGINEERING SUBSIDIARY OF GOVT-OWNED INSTITUTE FRANCAISE DE PETROLES AND BECHTEL FRANCE, TOTALLY-OWNED SUBSIDIARY OF BECHTEL CORPORATION OF SAN FRANCISCO. PARTICIPATION IN EVENTUAL PLANT WILL BE OPEN TO "EUROPEAN" COUNTRIES. SURVEY ENVISAGES FRENCH SITE AND IS TO BE COMPLETED BY END 1972. GIRAUD SAID FRANCE WILL CONSIDER CONSTRUCTION ALONE IF NECESSARY.



Department of State

TELEGRAM

LIMITED OFFICIAL USE

PAGE 02 PARIS 04012 121858Z

2. AEC REP AND EMBOFF FOLLOWED UP ANNOUNCEMENT MARCH 12 WITH AUGUSTINE ALLINE, MINISTRY OF FOREIGN AFFAIRS OFFICIAL IN CHARGE ATOMIC ENERGY MATTERS. ALLINE CONFIRMED ACCURACY GIRAUD'S REMARKS AND SAID THAT MFA HAD PARTICIPATED IN POLICY DECISION. HE ALSO CLARIFIED WHAT GIRAUD MEANT BY "EUROPEAN" PARTICIPATION: ALL EUROPEAN NATIONS ELIGIBLE EXCEPT USSR AND EE. ✓

3. ALLINE MADE FOLLOWING REMARKS ON DECISION: (A) POMPIDOU HAD MADE DECLARATION AT DEC 1969 HAGUE SUMMIT PUTTING GOF ON RECORD FAVORING JOINT EUROPEAN ATOMIC EFFORT. SINCE THEN, LITTLE PROGRESS MADE AND GOF IN VIEW FEB 26 DECISIONS BY COUNCIL OF MINISTERS TO ACCELERATE REACTOR PROGRAM HAS DECIDED TO MOVE AHEAD. (B) GOF PLANS CONSULT WITH EURATOM BUT HAS NEVER CONSIDERED THAT EURATOM MIGHT BE IN CHARGE OF PROJECT. ORGANIZATION HAS NO REAL INCOME; IS LIMITED TO SIX, SOME OF WHOM IN ANY EVENT ARE INTERESTED IN COMPETING CENTRIFUGE PROJECT; AND EURATOM AS RESEARCH ORGANIZATION NOT SUITABLE FOR OPERATIONAL REVENUE-PRODUCING TASKS. (C) OTHER ELEMENTS IN GOF DECISION WERE LACK OF RESPONSE FROM US TO ITS SUGGESTION SHARING ENRICHMENT TECHNOLOGY AND DELAYS IN US CONSIDERATION WHETHER AND HOW TO EXPAND ENRICHMENT CAPACITY. GIRAUD WILL BE DISCUSSING THIS AND RELATED MATTERS DURING HIS VISIT TO AEC NEXT WEEK. ✓

4. PRESS COVERAGE HAS BEEN COPIOUS AND LARGELY FAVORABLE. HOWEVER, PRESTIGIOUS LE MONDE IN FRONT PAGE EDITORIAL MAR. 13 EDITION POINTS OUT DIFFICULTIES. (A) CAPACITY WILL EXCEED FRENCH NEEDS WHILE BEST POTENTIAL CUSTOMERS ARE WORKING ON COMPETING CENTRIFUGE PROJECT. (B) COULD NOT US EASILY EXPAND OUTPUT TO RETAIN EUROPEAN MARKET? (C) EVEN IF ALL GOES FOR BEST PROJECT WILL BE ENORMOUSLY EXPENSIVE AND REQUIRE HIGH PRICES. (D) FINALLY, GERMANS WILL PROBABLY WANT HIGH PRICE FOR PARTICIPATION. GOF LET CHANCE SLIP THROUGH ITS HANDS FOREVER BY NOT MAKING ITS PROPOSITION THREE YEARS SOONER.  
DECON 12/31/73  
WATSON



Department of State

TELEGRAM

CONFIDENTIAL 693

PAGE 01 PARIS 04011 121809Z

45 40

ACTION SCI-01

INFO OCT-01 SS-20 NSC-10 NSCE-00 INR-07 CIAE-00 NSAE-00

ACDA-10 PRS-01 E-04 L-02 EUR-12 IO-04 OST-01 RSR-01

RSC-01 PM-03 DODE-00 /078 W

033882

R 121751Z MAR 71  
FM AMEMBASSY PARIS  
TO SECSTATE WASHDC 7467  
INFO USMISSION EC BRUSSELS  
AEC GERMANTOWN UNN  
AMEMBASSY MOSCOW

C O N F I D E N T I A L PARIS 4011

LIMDIS

SUBJECT: SOVIET ENRICHMENT FRENCH URANIUM

REF: PARIS 3746

1. AEC REP AND EMBOFF DISCUSSED SOVIET CONTRACT PROVIDE ENRICHED URANIUM SERVICES WITH ALLINE, IN CHARGE OF ATOMIC AFFAIRS, MFA, ON MARCH 12.
2. ALLINE SAID THAT FRENCH DECISION TO GO AHEAD WITH SOVIETS HAD SEVERAL ELEMENTS: FIRST, US PRICES HAD BEEN INCREASED TWICE AT TIME WHEN SOVIETS ARE ON RECORD AS STATING THEY PREPARED OFFER ENRICHMENT SERVICES. SECOND, GOF STILL REGRETS FOLD DOWN US-FRENCH BILATERAL AGREEMENT IN FAVOR OF PASSING ENRICHMENT SERVICES THROUGH EURATOM. ALLINE HINTED THAT IF US AND FRANCE STILL HAD APPROPRIATE BILATERAL ARRANGEMENTS GOF MIGHT STILL BE PURCHASING FROM US. FINALLY, TRANSACTION WAS ON A PURELY COMMERCIAL BASIS.
3. WE ASKED ALLINE ABOUT PRICE. HE SAID THIS INFORMATION OF COURSE CONFIDENTIAL AND COULD NOT BE FURNISHED. HOWEVER, HE NOTED THAT SINCE TRANSACTION WAS COMMERCIAL THE PRICE COULD NOT BE FAR FROM US ENRICHMENT PRICE.



Department of State

TELEGRAM

CONFIDENTIAL

PAGE 02 PARIS 04011 121809Z

4. AT DINNER WITH EMBOFF MARCH 9, FONMIN SCHUMANN'S DEPUTY  
CABINET DIRECTOR CUVILLIER ATTEMPTED TO DOWNPLAY SIGNIFICANCE  
OF RECENTLY CONCLUDED "VERY SMALL CONTRACT" FOR SOVIET SUPPLY  
OF ENRICHED URANIUM SERVICES. AT SAME TIME, CUVILLIER EMPHASIZED  
FRENCH INTENTION TO CONTINUE PURCHASES OF ENRICHED URANIUM FROM  
US. GP-3  
WATSON



Department of State

TELEGRAM

CONFIDENTIAL 743

PAGE 01 EC BRU 00878 161130Z

18  
ACTION SCI-06

INFO: OCT-01 EUR-20 IO-13 ACDA-19 CIAE-00 INR-08 L-04

NSAE-00 NSC-10 OST-01 RSC-01 SS-20 H-02 RSR-01

PRS-01 USIA-12 SSO-00 NSCE-00 CCO-00 /122 W

GUTHIN  
FILE

- ANDERSON
- BEHR
- BERGSTEN
- CHAPIN
- HOLDRIDGE
- KENNEDY
- LEHMAN
- NACHMANOFF
- ROBINSON
- FONDON
- SAUNDERS
- SMITH
- SMYSEN
- SONNENFELDT
- WRIGHT

P-03

056313

O R 160955Z MAR 71  
 FM USMISSION EC BRUSSELS  
 TO SECSTATE WASHDC 2725  
 AEC GERMANTOWN 67  
 INFO AMEMBASSY BONN  
 AMEMBASSY BRUSSELS UNN  
 AMEMBASSY THE HAGUE  
 AMEMBASSY LONDON  
 AMEMBASSY PARIS  
 AMEMBASSY MOSCOW  
 AMEMBASSY ROME  
 USMISSION OECD PARIS UNN

C O N F I D E N T I A L EC BRUSSELS 878

POLICY

SUBJECT: US-EUROPEAN COOPERATION ON URANIUM ENRICHMENT

REFS: A) PARIS 4012 B) BONN 2986 C) STATE 40402

1. SUMMARY: IT IS APPARENT THAT INTERMITTENT OIL CRISES IN THE PERSIAN GULF AND NORTH AFRICA, TOGETHER WITH THE UNANTICIPATED SURGE IN DEMAND FOR ELECTRIC POWER WITHIN THE PAST YEAR, ARE REINFORCING WEST EUROPEAN DETERMINATION TO REDUCE AS RAPIDLY AND SUBSTANTIALLY AS POSSIBLE EUROPEAN LONGTERM DEPENDENCE ON OUTSIDE ENERGY SOURCES. IN A NUCLEAR FUEL CONTEXT (LEAVING ASIDE PROSPECTS FOR COAL AND NATURAL GAS), THIS VIEW IS ACCENTUATED BY A GROWING LOSS OF CONFIDENCE IN THE US AS A RELIABLE SOURCE OF SUPPLY. THE EUROPEAN ATTITUDE IS EVIDENCE BY THE RECENT INCREASE IN THE TEMPO, MAGNITUDE AND NUMBER OF INITIATIVES DEVOTED TO FINDING ALTERNATIVE SOURCES OF SUPPLY TO THE US AND BUILDING UP EUROPE'S OWN URANIUM ENRICHMENT CAPABILITY FOR THE LONGER TERM. SO FAR AS US POLITICAL AND ECONOMIC



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CONFIDENTIAL

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INTERESTS ARE CONCERNED, TIME IS BECOMING OF THE ESSENCE IF THE US WISHES TO USE ITS WASTING TECHNOLOGICAL ASSET OF ADVANCED GASEOUS DIFFUSION TECHNOLOGY TO ASSURE THAT ITS QUASI-MONOPOLY IN SUPPLYING NUCLEAR FUEL IS REPLACED BY A MUTUALLY BENEFICIAL RATIONALIZATION OF PRODUCTION CAPACITY AND MARKET STRUCTURES UNDER EFFECTIVE SAFEGUARDS CONTROL. THE ALTERNATIVE TO A SIGNIFICANT US INITIATIVE COULD WELL BE A CHAOTIC, UNCOORDINATED SPATE OF EUROPEAN ENRICHMENT EFFORTS, POSSIBLY ACCOMPANIED BY A WEAKENING OF THE INTERNATIONAL SAFEGUARDS SYSTEM. MOREOVER, AN UNDULY GREAT DEPENDENCE ON SOVIET ENRICHMENT SERVICES IN THE EVENT OF INSUFFICIENT ASSURANCES OF EUROPEAN OR US PRODUCTION CAPACITY CANNOT BE RULED OUT. END SUMMARY.

2. INFORMAL DISCUSSIONS WITH GOVERNMENT AND INDUSTRY OFFICIALS BEAR WITNESS TO THE EUROPEAN DISQUIET. MORE IMPORTANT, RECENT AND PROSPECTIVE ACTIONS OF THE FRENCH, GERMANS AND OTHER WEST EUROPEANS PROVIDE CONCRETE EVIDENCE OF THIS DEVELOPING TREND. RECENT FRENCH NOTIFICATION OF THEIR PURCHASE OF ENRICHMENT SERVICES FROM THE SOVIET UNION SPECIFICALLY INCLUDED A REFERENCE TO THE LACK OF RESPONSE FROM THE US TO THE SUGGESTED SHARING OF ENRICHMENT TECHNOLOGY AND DELAYS IN US CONSIDERATION WHETHER AND HOW TO EXPAND ENRICHMENT CAPACITY (PARIS 4012). SIMILARLY, THE GERMANS HAVE MADE UNMISTAKABLY CLEAR THAT A KEY ELEMENT IN PLANNING AND SCHEDULING FOR NEW EUROPEAN ENRICHMENT CAPACITY IS THE BELIEF THAT US ENRICHMENT CAPACITY WILL BE INADEQUATE TO MEET FORECASTED EUROPEAN REQUIREMENTS (BONN 2986).

3. WITH REGARD TO THE SOVIET UNION AS A COMPETING SOURCE OF SUPPLY, ATTENTION HAS BEEN FOCUSED FOR SOME TIME ON THE SWEDES AND GERMANS AS POSSIBLE CUSTOMERS FOR SOVIET ENRICHMENT SERVICES. WHILE GERMAN OFFICIALS HAVE CONSISTENTLY DOWNPLAYED SUCH SUGGESTIONS, OUR FEELING IS THAT THE GERMAN CONSTRAINT MAY HAVE FLOWED PRIMARILY FROM A RELUCTANCE TO BEING THE FIRST IN THE WEST TO CONTRACT WITH THE SOVIETS IN THIS POLITICALLY SENSITIVE AREA. GIVEN THE RECENT FRG-SOVIET AGREEMENT ON SCIENCE AND TECHNOLOGY, WITH BOTH SIDES TRYING TO FIND APPROPRIATE AREAS FOR COOPERATION, IT WOULD NOT BE TOO SURPRISING TO FIND THE GERMANS FOLLOWING THE FRENCH LEAD IN PURCHASING SOVIET ENRICHMENT SERVICES IN THE ABSENCE OF MORE MEANINGFUL US ASSURANCES ON SUPPLY OR ENRICHMENT COOPERATION.

4. US AND EUROPEAN ATTITUDES AND DEVELOPMENTS CONCERNING NUCLEAR FUEL SUPPLY POLICIES, MARKET PROJECTIONS, PLANNED NEW OR IMPROVED

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Department of State

TELEGRAM

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PAGE 03 EC BRU 00878 161130Z

PRODUCTION FACILITIES, ETC., HAVE AN OBVIOUS INTER-RELATIONSHIP; AND THEY ALL HAVE CONTRIBUTED TO THE EXISTING UNCERTAINTY IN THE US AND EUROPE ABOUT OVERALL DEMANDS ON US AND PROSPECTIVE EUROPEAN URANIUM ENRICHING CAPACITY FOR THE PERIOD 1975-85. ACCORDINGLY, WE URGE THAT THE US PROCEED PROMPTLY TO EXPLORATORY DISCUSSIONS WITH MAJOR EUROPEAN CONSUMERS IN AN EFFORT TO RATIONALIZE THE GLOBAL SUPPLY AND DEMAND PICTURE. THESE TALKS, WHICH NEED NOT INVOLVE A SPECIFIC COMMITMENT FOR SHARING US TECHNOLOGY ABROAD, COULD BOTH CLARIFY THE EXTENT TO WHICH OVERSEAS CONSUMERS ARE WILLING TO REDUCE TO CONTRACTUAL COMMITMENTS THEIR FORESEEABLE REQUIREMENTS FOR US ENRICHING SERVICES AND CRYSTALLIZE TO A SIGNIFICANT DEGREE THEIR PLANS AND HOPES FOR CONSTRUCTING ADDITIONAL ENRICHING CAPABILITIES EITHER INDEPENDENTLY OR IN COOPERATION WITH THE US. THIS MIGHT PERMIT THE US TO DECIDE ON A TIMELY BASIS THE NATURE AND DEGREE OF ASSURANCES ON SUPPLY AND/OR COOPERATION ABROAD WHICH WE WOULD WANT TO PROVIDE. SUCH AN APPROACH WOULD MINIMIZE THE RISK THAT ADDITIONAL PRODUCTION CAPACITY WOULD BE BUILT PREMATURELY IN THE US OR OVERSEAS AND WOULD ASSURE A BETTER BASIS FOR DECIDING ON THE OPTIMUM SCHEDULE FOR ALLOCATING FUNDS FOR CIP/CUP.

GP-3

ABRAMS

CONFIDENTIAL

11/28

BOB/TOM:

Remember the Uranium Enrichment and the French Ambassador (23247) (Hak had signed a memo to Johnson at State on 11/23 and that was M/f)?

Well, here is more. That package had two folders -- one from Behr (Johnson letter) and this one from Sonnenfeldt (an info memo).

Accordingly, this should be microfilmed and sent to PAFILES and added to the already-started set of cards for 23247.

But, the fun isn't over. On 11/25, another memo from Behr/Sonnenfeldt was sent to Hak for decision and so far it hasn't come back to us. Since the suspense had a typed duplicate log ticket (which I think you may have done) I have left it in suspense and have taken out this "part from Sonnenfeldt".

Understand? If questions, ask me. If I understand, I'll explain.

Craig.

MEMORANDUM

23247

NATIONAL SECURITY COUNCIL

SECRET/SENSITIVE

INFORMATION

November 18, 1970

MEMORANDUM FOR MR. KISSINGER

AK

FROM: Helmut Sonnenfeldt

SUBJECT: Conversation with the French Ambassador: (1) Gaseous Diffusion; (2) Integrated Circuits.

As instructed, I asked the French Ambassador today about the apparent difference in the note he had handed you on April 13 and the subsequent approach of the French Minister to State on the matter of cooperation on a gaseous diffusion plant.

Lucet said that his approach to you was intended to propose bilateral cooperation in a feasibility study (and other relevant studies) which would then serve as a basis for a proposal for a joint US-French project. The actual project, however, would be under EURATOM, as mentioned in the French approach to State. I said this clarified the matter for me. Lucet said the French were still awaiting our response.

(NOTE: Bob Behr will shortly send you a joint memorandum on this with suggestions on how we might proceed.)

\* \* \* \* \*

Lucet also referred to the French request for our support in COCOM on the export of integrated circuits to Poland. He mentioned that a French delegation had just been here and had seen Trezise and Wright from State and Mountain from Defense. Lucet said that the discussions had been very full and frank and Trezise had intimated that a US official might come to Paris to determine whether a distinction could be made between civilian and military applications of these circuits. Lucet stressed that this was a matter of great importance to his Government and that Schumann had mentioned it to Secretary Rogers, in addition to the approach that was made to the White House. I said I had not yet heard from State regarding the conversations with the French delegation; but the matter would of course be given full consideration. Lucet stated that he had mentioned the subject to you recently and hoped that you could again intervene in France's behalf, as you did last year.

CC: Col. Behr  
Fred Bergsten

SECRET/SENSITIVE

NOV 28 1970

HAK has seen

23247  
wl

Action

MEMORANDUM

NATIONAL SECURITY COUNCIL

SECRET/SENSITIVE

INFORMATION

November 4, 1970

@

MEMORANDUM FOR MR. KISSINGER

FROM: Robert M. Behr/Helmut Sonnenfeldt

SUBJECT: Cooperation with the French on Gaseous Diffusion



I have the impression  
that he is talking  
bilaterally. Hal  
please pin down  
+ get him  
convinced  
indicated

NOV 13 1970

On a recent memo relating to French computer technology and COCOM controls, you penned a note requesting a status report on Lucet's inquiry concerning cooperation on a gaseous diffusion plant (Tab A). Lucet left an aide-memoire with you on this April 13 which suggested (though did not explicitly state) a bilateral US-French cooperative project (Tab B). You subsequently phoned Lucet and told him to take up the matter with State. When the French Chargé went to State on April 21 (Herman Pollack, SCI), the French pitch was very much altered in tone, and was geared to a multilateral EURATOM approach (Tab C). In response, Pollack could only advise the French that the basic policy on the export of diffusion technology was under review, and there could be no response to the French approach until that broader issue was decided.

Consideration of the broader question of export of diffusion technology culminated with the President's decision of September 14 (Tab D) by which he approved the commencement of exploratory talks with the Commission of the EC, the member states of EURATOM and the UK on the possibility of assisting in the construction of a multinationally owned and operated diffusion plant. This decision proceeded on the basis that any approach would be multilateral not bilateral, and so any prospect of a special exclusive bilateral arrangement with France was not seriously considered. But, this multilateral approach would be consistent with the line the French took at State.

The President's mid-September approval was subject to appropriate consultation with the Joint Committee on Atomic Energy. On this point a snag has developed. Congressman Holifield and his staff man (George Murphy) oppose the President's decision. Another round of consultations with the Committee will probably be held before the end of the month, but at this point it is very difficult to judge whether the Committee can be brought around. We will be working with State and the AEC and with Timmons'

SECRET/SENSITIVE

NATIONAL SECURITY COUNCIL CORRESPONDENCE ROUTING AND CONTROL PROFILE

NUMBER MO DA HR

23247 10 31 12

DOCUMENT SOURCE/CLASS/DESCRIPTION

TO: PRES \_\_\_\_\_ FROM: ELIOT \_\_\_\_\_ CLASSIF: U \_\_\_\_\_ EXDIS  
 HAK  \_\_\_\_\_ ROGERS \_\_\_\_\_ C \_\_\_\_\_ NODIS  
 LAIRD \_\_\_\_\_ LOU  \_\_\_\_\_ EYES ONLY  
 S  \_\_\_\_\_ RES DATA  
 TS \_\_\_\_\_ CODEWORD  
 \_\_\_\_\_ SENSITIVE  
 \_\_\_\_\_ PARIS MTG  
 \_\_\_\_\_ NO FORN

DOC DATE: 10-30-70 Johnson, U

SUBJECT: European collaboration w/ <sup>French</sup> Canada on uranium enrichment plant.

ENCLOSURES: ( ) ( ) NOT XEROXED FOR SUSPENSE FILE

SECRETARIAT DISTRIBUTION/ACTION

INTERNAL ROUTING AND DISTRIBUTION

NAME: Behr

	ACTION	INFO	RCD CY FOR:
ADVANCE CYS TO HAK/HAIG			
STAFF SECRETARY			
DIR, SECRETARIAT			
SUB-SAHARAN AFRICA			
NR EAST/NORTH AFRICA			
EUROPE/CANADA			
LATIN AMERICA			
UNITED NATIONS			
ECONOMIC			
SCIENTIFIC	<input checked="" type="checkbox"/>		
PLANNING GROUP			
PROGRAM ANALYSIS			

ACTION REQUIRED

MEMO FOR HAK ..... ( )  
 MEMO TO PRESIDENT ..... ( )  
 REPLY FOR HAK SIGNATURE ..... ( )  
 REPLY FOR PRES SIGNATURE ..... ( )  
 MEMO \_\_\_\_\_ TO \_\_\_\_\_ ..... ( )  
 RECOMMENDATIONS ..... ( )  
 JOINT MEMO ..... ( )  
 APPROPRIATE ACTION .....   
 ANY ACTION NECESSARY ..... ( )  
 CONCURRENCE ..... ( )  
 DUE DATE: 11/5

COMMENTS: (Including Special Instructions)

INTERNAL ROUTING

DATE	FROM	TO	ACTION REQUIRED
11/04	Behr	HAK	Implication appropriate Action on French Memo to Johnson cc Behr
11/13	NSC/S	Sonnenfeldt	
11/13	NSC/S	Behr	
11/18	Behr	HAK	

DISPOSITION

DISPATCH: LETTER/MEMO \_\_\_\_\_  
 NOTIFY: \_\_\_\_\_  
 COPIES: (AS MARKED ABOVE)

NSC \_\_\_\_\_ STAFF APPROVAL  
 PAF  \_\_\_\_\_ HAK APP'L  
 WHC \_\_\_\_\_ HAK MARGINALIA  
 SUBF \_\_\_\_\_  NS3 FORM REQUIRED

office to ensure that we line up the Republican representation if Holifield calls for a vote of the whole Committee. In light of the sensitive stage of the consultations, the US Government has not been discussing this matter with any country. As a matter of fact, however, most of the EC countries are aware that a major decision has been taken and that we are facing some trouble in the Joint Committee.

When the consultations are completed, State plans to inform the UK, EURATOM and its member states of the President's decision. A special approach would be made simultaneously to France in response to its proposal to State of April 21. The US response would be that we agree with France (a) that US-European cooperation in the construction of a multinational diffusion plant in Europe is worthy of serious consideration and (b) that EURATOM would provide a good framework for such possible cooperation. We would also mention that we attach importance to close cooperation with France as discussion of this question proceeds in Europe.

Meanwhile, U. Alexis Johnson has written you (Tab E) regarding a report by an American commercial source that there is a movement afoot in Europe, possibly originating with France, to collaborate with Canada on a consortium for a Uranium enrichment plant utilizing cheap Canadian hydroelectric power.

Mr. Johnson states that there was some thought that Trudeau might approach the President on this. We agree with Mr. Johnson that we cannot and should not do anything about this information at this time. He hopes that we will soon shake the Joint Committee loose on letting us talk to the Europeans about an enrichment plant. If there is anything to this report it should emerge at that time.

→ Since Mr. Johnson is only informing you of this report, we do not believe you need reply to this letter.

*Let's reply anyway.*

If Lucet raises the question of his approach to you last April, you may wish to advise him that the French approach -- and you may wish to distinguish between the approach to you and the one to State -- has been folded into the larger question of the export of this technology generally. At this point in the consultations with the Joint Committee, you will be able to tell Lucet only that you would hope that a decision on the broad issue and the French request can be announced in the next couple of months.

(NOTE: We have not been able to account for the difference in Lucet's approach to you on April 13 (for bilateral cooperation) and to the formal

French approach (at your suggestion) to State on April 21 relating the matter to US-EURATOM relations. While intriguing, in any talk with Lucet it would probably be unwise for you to attempt to determine what, if any, significance there is in the discrepancy. (It may just be a goof.) In any case, it does not seem feasible, in light of developments, for you to give any encouragement to Lucet on a bilateral basis.) *HS*

MEMORANDUM

NATIONAL SECURITY COUNCIL

22860

*Handwritten:* ~~Handwritten~~ informed

SECRET

ACTION

October 20, 1970

MEMORANDUM FOR MR. KISSINGER

FROM: Helmut Sonnenfeldt *HS.*

SUBJECT: French COCOM Case; Your Potential Involvement.

*Handwritten:* Hal - Loret has asked about the French request regarding on nuclear diffusion plant. Please let me know by signing of business November 1 1970

In June, the French submitted to COCOM their proposal to sell to Poland certain machinery and technology required to produce a line of integrated circuits. The request also included an expansion of the number and type of silicon transistors to be produced by the Polish plant approved for export by COCOM last October. This particular case involves only \$7 million, but is the second stage of the French/Polish industrial venture, the total value of which might exceed \$50 million. You will recall that the first stage (involving silicon transistors) was approved last October only after lengthly inter-agency debate and French intercession with you. It was made clear then to the French that the U.S. decision in no way established a presumption for approval of subsequent transactions.

In the present case, all agencies concerned (Defense, State and Commerce) agreed that qualitatively and quantitatively transferring the technology and production equipment in the French request involved a substantial increase in the security risk over last year's case. The quality and quantity of the devices to be produced exceed the needs implicit in the stated end use, and have direct military potential. Further, neither the USSR nor any Eastern European country has the capability at this time to manufacture the integrated circuit systems commercially, and the acquisition of this technology has been high on the Soviet shopping list. It is considered that the Soviets would probably have access to any Western electronic technology acquired by Poland. Finally, the agencies considered that approval of this case would make it almost impossible to maintain COCOM embargoes on this line of important technology (obversely, there is the possibility that, if their request is not approved, the French might proceed with the sale and thumb their nose at COCOM). Thus, in light of the unanimity within the bureaucracy not present in the case last year, we cleared (with General Haig's concurrence) a cable stating the U.S. objection. Copy is attached at Tab A.

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SECRET

- 2 -

Predictably, the French were upset at the U.S. objection. Late on October 16, Lucet sent me an aide-memoire for transmission to you (Tab B). I told the French that the note would be studied with care, but that they should understand that there was unanimity within the U.S. Government on this case unlike the situation which prevailed last year. In short, I gave the French no basis for encouragement. On October 17, Alphand called in Culley (DCM in Paris) and gave him a similar note (Tab C). The notes point out the considerable importance the French place on this deal, and also indicate that the French read more into the favorable American decision of last year than they should have. The French proposed to send a team to Washington to furnish us with additional information which, they say, it is not possible to provide within COCOM because of potential competition in the Polish market. The French insist that the transfer of technology will not create any strategic difficulties in the military field.

Prior to Lucet's transmittal of the note to me, Phil Trezise met with his French counterpart who happened to be here and provided him with a copy of the aide-memoire Lucet later sent me. Trezise told him that we were willing to hold meetings with a French team of technicians, as well as individuals who could review the political aspects. Having received Trezise's report, Cully also told Alphand the same thing. The French will very soon propose a date for the arrival of their team.

There are two possible directions which this issue can take. One possibility is that once the French team arrives, the solid phalanx of agency opposition will begin to crumble, with State finally favoring the deal, and with Defense remaining opposed on security grounds. At some point the issue will then be sent here for arbitration as it was last year. The other possibility (probably more remote) is that the agencies will remain solidly opposed, and the French then will expect you or the President to reverse the bureaucracy by a political decision. At that point you may want to take up the issue with the President. Regardless which direction the matter takes, the issue will be sticky, particularly in light of our own negative decision in the case of the catalytic cracker for Poland. The other COCOM members are cagey in playing this one. Apparently, the UK, Dutch, Italians, Germans and Japanese are not happy with the French request on security grounds, but may not wish to buck the French (the UK increasingly feels that the French are getting away with more in COCOM than others). Commercial factors are also at play. These others may very well consider that if the French have their way on this case, then a quid pro quo can be demanded which would involve a loosening of the COCOM restrictions for future cases -- which would benefit their own commercial interests.

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SECRET

- 3 -

RECOMMENDATION:

That you approve the general line of "no encouragement" which I took with the French.

Approve AK Disapprove \_\_\_\_\_ Other \_\_\_\_\_

That, since State has already agreed to receive the French team, you agree that there is no need for you to become involved at this point (I shall of course continue to monitor the action).



Agree AK Disagree \_\_\_\_\_

*Inform Lucet of State inv. with French team  
I called Lucet 11/3 to note  
that State will receive French team  
TB.*

SECRET

MEMORANDUM

THE WHITE HOUSE

WASHINGTON

SECRET

ACTION

April 16, 1970

MEMORANDUM FOR MR. KISSINGER

FROM: Helmut Sonnenfeldt

SUBJECT: Cooperation with the French on Gaseous Diffusion

The memorandum which Ambassador Lucet left with you on April 13 (Tab A) proposed that US and French authorities study the feasibility of constructing in France a gaseous diffusion isotope separation plant. It makes clear that the French are still very interested in the diffusion method for uranium enrichment, in contrast to the UK, FRG and Dutch joint efforts in the centrifuge process. The memo is unclear on what sort of controls (bilateral, Euratom, IAEA) the French would accept if such a US-French plant were constructed.

The French undoubtedly are aware that we are considering the possibility of cooperating on a multi-national basis with Western Europe in the gaseous diffusion field, and may have proposed this bilateral effort to undercut any possible multilateral steps. Aside from this and the political benefits of a Franco-American deal in this field, a bilateral project of the kind proposed would have definite practical advantages for the French:

-- they would be able to update their own gaseous diffusion technology to put it roughly on a par with ours (only the US, UK, USSR, China and France have diffusion technology);

-- by having an additional facility, the French would be in a better commercially competitive position relative to the tripartite centrifuge project (particularly if the Italians and Belgians join to make it a five nation project).

We would benefit little in technological terms from any such project, although it would serve to energize our other bilateral scientific cooperation efforts with the French. Politically, the gain in Franco-American relations would have to be balanced against any possible undermining of Euratom and other multi-national cooperative efforts in the diffusion area.

SECRET

SECRET

- 2 -

As a practical matter, a Presidential decision on the fundamental issue of US policy on cooperation in the uranium enrichment field should precede any decision on the French proposal. The USC has submitted a memo on this basic issue (recommending US sharing of diffusion technology on a multi-national basis in Western Europe), but Bob Behr considers the study lacking and has recommended that it be sent back for further work (his memo of March 23, Log #7799). The French proposal should be factored in to that broader study. The most appropriate method of doing that--and at the same time avoiding placing the White House in the middle of the fundamental issue before its resolution--would be for you to suggest to Ambassador Lucet when you meet with him on Friday that he deliver the French proposal to the State Department directly.

RECOMMENDATION:

That you

-- return to Lucet the memorandum he left with you  
(Tab A);

-- suggest that the proposal may appear quite interesting  
but would require technical study;

-- and that it would be more appropriate if he were to convey  
the proposal directly to the State Department.

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Paris, March 16, 1970

*Click with  
Sennefeldt*

MEMORANDUM

Outlook for Franco-American Cooperation  
in the Field of Isotope Separation

The rapidly increasing construction of nuclear power plants using enriched uranium as fuel for the production of electricity naturally leads the European countries to give thought to their future supply of this fuel. The idea has therefore developed in various quarters that additional facilities for the separation of isotopes could be installed in Europe. Recent initiatives have confirmed that trend of thought. In the late Spring of 1969, the Common Market Commission recommended that this problem should be approached on an European Economic Community basis ; the President of the French Republic expressed his interest in the matter on the occasion of the Conference at The Hague ; and the French Minister of Foreign Affairs developed the concept further on March 6, 1970, at Brussels. On the other hand, three of the European countries - Great Britain, The Netherlands and the Federal Republic of Germany - have decided to pool their efforts to develop the ultracentrifuge process.

Unlike the British Government, which has ceased to manifest any interest in the gaseous diffusion method, the French Government is continuing its research in this method, in the belief that it can still be greatly improved. The experience acquired by the Americans in this field is very wide, while that of the French is more limited although far from negligible ; it is more than likely that discussion by both countries of their own experience might prove to be fruitful for both of them.

In this spirit, American and French authorities could undertake a technical and economical study intended to show the feasibility of a plant for isotope separation by gaseous diffusion capable, in particular, of supplying the European market, the capital and operating costs to be appraised on the basis of prevailing economic conditions in Western Europe. A study of this kind, if its results proved to be positive, could then serve as a basis for the joint preparation of a project for the construction of a plant which would quite naturally come within the scope of the common actions provided for in the EURATOM treaty.

Under these conditions, the output of the plant would be subject to official controls to ensure its use for peaceful purposes. Its location in France would provide all the necessary assurances as to the preservation of technological secrets relating to the design of the plant and the production of its essential parts.

MEMORANDUM

THE WHITE HOUSE  
WASHINGTON

9723

CONFIDENTIAL/NODIS

INFORMATION

April 27, 1970

MEMORANDUM FOR MR. KISSINGER

FROM: Helmut Sonnenfeldt *HS*

SUBJECT: Cooperation with France on Gaseous Diffusion: French Take  
Different Line at State than Lucet d.d with You

*Handwritten notes:*  
Toll State told  
Lucet no need  
thing - told him  
State take  
at State

Earlier this month, Ambassador Lucet left a memo with you proposing that US and French authorities study the feasibility of constructing in France a gaseous diffusion isotope separation plant. In response to your request, I recommended (log #9335) that you suggest to Lucet that it would be more appropriate if he were to convey the proposal directly to the State Department. I understand you took this action in a phone conversation with the Ambassador on April 17.

*Stamp:* MAY 19 1970

The French Chargé and Scientific Counselor called on Herman Pollack, State's Director of Scientific Affairs, on April 21 (memcon attached at Tab A). The Chargé mentioned that Ambassador Lucet had raised this subject with you and that it was their understanding that you intended to mention it to the President in the next few days. You also suggested, he reported, that the French discuss the subject with State.

Substantively, the French emphasized that they envisaged a US-French feasibility study of the construction by EURATOM of the gas diffusion plant, and that EURATOM safeguards would apply. In effect, France would serve as intermediary between the US and EURATOM. The plant, they stressed, would not be French.

The line the French took at State departs from that in the memo Ambassador Lucet left with you. The tenor of that memo was that the British, Dutch and Germans were concentrating on the centrifuge process, but the French still valued the gaseous diffusion process. In that context, they were interested in Franco-American cooperation. There was no mention that the prospective plant would be constructed by EURATOM. Moreover, while the memo indicated the output of the plant would be subject to "official controls," there was no reference to EURATOM controls. Admittedly, the memo was vague, but the tone clearly suggested a bilateral approach, in contrast to the EURATOM-wide stress at State.

CONFIDENTIAL/NODIS

-2-

In response to the French approach, Pollack noted that the basic policy on the export of diffusion technology was under review, and it might be months before a decision was reached. (Your April 16 memo to the Chairman, NSC Under Secretaries Committee, requested that supplemental information on a program for international cooperation in uranium enrichment should be submitted by May 18.) *Tab C.*

The shift in emphasis by the French is confusing, although the EURATOM role would presumably make the proposal more attractive to us. In addition, it seems that the French are attempting to use your involvement to move State toward a positive consideration of their proposal.

cc: Col. Behr

MEMORANDUM

THE WHITE HOUSE

WASHINGTON

May 20, 1970

SECRET

MEMORANDUM FOR THE RECORD

SUBJECT: Cooperation with the French on Gaseous Diffusion

This morning I called SCI Director Pollack and reported to him HAK's penned comment on Log #9723 (i. e., that HAK's recollection was simply that he had advised Ambassador Lucet to take up the matter with the State Department), in contrast to the comment made by the French Charge to Pollack on April 21. Pollack appreciated confirmation of HAK's conversation with Lucet, which he had earlier thought was somewhat misrepresented by Ambassador Lucet.

Pollack said that the response to the French demarche had not yet been agreed even within State. There were some differences of view between SCI and EUR. In any event, the final position will be sent on the Eliot to HAK channel for approval prior to any further discussion with the French.

Arthur T. Downey

SECRET

HP  
I:HPollack:ans  
4/23/70 x-21554

CONFIDENTIAL  
DEPARTMENT OF STATE

Dr. Kissinger  
~~\_\_\_\_\_~~ *Forney*  
Behr

*Memorandum of Conversation*

DATE: April 21, 1970

SUBJECT: EURATOM

PARTICIPANTS: Mr. Jacques Leprette, Charge d'Affaires, a.i.,  
Embassy of France  
Mr. Maurice Levy, Scientific Counselor,  
Embassy of France  
Mr. Herman Pollack, Director, SCI, Department of State

COPIES TO: U - The Under Secretary PM - Mr. Lehmann (cc)  
J - Ambassador Johnson SCI - Mr. Zook (cc)  
S/S - Mr. Eliot  
EUR/FBX - Mr. Tanguy (cc) White House - Dr. Kissinger (cc)  
EUR/RPE - Mr. Phillips(cc) AEC - Mr. Kratzer (cc)

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Late last week Mr. Levy requested an opportunity for him and Mr. Leprette to visit me privately at 2:30 p.m. today.

Mr. Leprette opened by expressing the hope that our conversation could be kept to just the three of us. Thereafter most of the conversation was carried by Mr. Levy.

They sought my reaction to a proposal that a French-U.S. team be established to carry out a feasibility and preliminary economic study of the construction by EURATOM of gaseous diffusion plant based on American technology. In effect the French would serve as intermediary with other EURATOM countries. They emphasized that EURATOM safeguards would apply and that they were proposing a EURATOM, not a French plant. They also made clear their belief that an arrangement would have to be established that would maintain the classified nature of the barrier and possibly other diffusion technology.

I stated that the basic question of our policy on the export of diffusion technology was under review, and that it would be weeks and possibly months before a decision was reached. It might therefore be some time before a reaction to their suggestion was possible.

In response to my query they indicated they had given no thought to whether any technology made available would also be

CONFIDENTIAL

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used in Pierrelatte or Capenhurst. They also had no suggestions to offer as to how the U.S. might handle criticisms of such a distinctive and significant cooperation in a sensitive nuclear energy field with a non-signatory to the NPT.

Mr. Leprette stated that late last week Ambassador Lucet raised this same subject with Dr. Kissinger in the course of a review of U.S.-French relations. It was their understanding that Dr. Kissinger intended to mention this to the President in the next few days. Dr. Kissinger also suggested they discuss the subject with the Department of State.

I indicated the need to consult elsewhere in the Department of State, and with the Atomic Energy Commission and White House staff before responding to their suggestion. I was asked to limit as much as possible the number of those brought into the discussion at this time and to keep the discussion as confidential as possible.

They stated they did not intend at present to extend their consultations to other agencies.

MEMORANDUM

ACTION - 10773/11568/21421

THE WHITE HOUSE

WASHINGTON

CONFIDENTIAL/SENSITIVE  
SECRET - RD ATTACHMENT

September 8, 1970

MEMORANDUM FOR THE PRESIDENT

FROM: Henry A. Kissinger *HK*

SUBJECT: Proposed Program for Cooperation with Allies in the Uranium Enrichment Field

The NSC Under Secretaries Committee has recommended (Tab C/Studies, Tabs D, E, F) that you modify the long-standing US policy of not cooperating with other countries in the uranium enrichment field by authorizing:

- exploratory talks with western European states on the possibility of sharing US gaseous diffusion technology on a classified basis to assist them to construct a multinationally owned and operated diffusion plant; and
- similar discussions, if requested, on the possibility of multinational cooperation with other friendly countries, particularly Japan, Canada and Australia.

Any sharing would be contingent upon the execution of a suitable agreement(s) for cooperation which would require your approval.

Background

With the growing demand for electrical power by nuclear reactors, there is a parallel demand for enriched uranium to fuel the reactors. Additional enrichment facilities will be required by 1980 to meet projected world requirements for nuclear fuel, even with the full utilization of our present capacity.

Two techniques are commercially attractive for production of enriched uranium — the gaseous diffusion process and the gas centrifuge process. The diffusion process is of proven reliability with known cost factors. Diffusion plants are located in the US, the UK, France, the USSR and Communist China. The centrifuge process is in the experimental stage in the UK, the FRG, the Netherlands and the US, and is believed to have considerable commercial promise.

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Except for some restricted programs with the UK, US policy has been (1) to withhold enrichment technology from other countries, and (2) to reduce incentives abroad to develop enrichment facilities by supplying enriched uranium under long-term agreements and with safeguards.

Today, other countries are attracted by the prospect of not being dependent totally on the US for nuclear fuel and by commercial possibilities for exporting nuclear reactors and fuel. In any event, enrichment plants will be built abroad even if US technology is withheld.

Britain, Germany and the Netherlands have concluded an agreement to develop commercial gas centrifuge facilities. Belgium, Italy and Australia have signified interest in this centrifuge effort. Prime Minister Vorster recently announced South Africa's intention to build enrichment facilities based upon a new, and as yet undisclosed, process. France has expressed interest in the US cooperating with Europe in the diffusion field.

#### Issue and Options

The issue, therefore, is whether the US should cooperate with foreign uranium enrichment developments. There are three options.

#### Option 1. Maintain our present policy of non-cooperation.

The main arguments for this option are that (1) cooperation, even on a classified basis, increases the risk that US advanced technology might be diverted to military purposes or obtained by others for military purposes; and (2) aggressive US competition, combined with the financial uncertainty surrounding the independent development of large-scale facilities abroad, might prolong the US hold on the foreign market.

On the other hand, (1) industrially advanced countries — particularly Western Europeans, Australia and Japan — are determined to acquire some independent enrichment capability with or without US cooperation; (2) cooperation with allies on a multinational basis would pay political dividends by signalling US recognition of their enrichment needs and could promote European integration; and (3) after the late 1970's, the US cannot meet projected US and foreign requirements for nuclear fuel without expanded production capacity acquired at considerable expense.

#### Option 2. Cooperation in the gaseous diffusion field alone.

The main arguments for this option are that (1) it would provide Europeans and others with an alternative to development of centrifuge facilities

which offer greater possibilities for nuclear weapon proliferation than do diffusion facilities; and (2) Europe's demand for fuel could be satisfied by a single diffusion plant, multinationally owned and operated.

On the other hand, this option could be seen as a ploy to subvert the tripartite (UK-FRG-Dutch) centrifuge program because we do not include possible cooperation in the centrifuge process.

Option 3. Cooperation in both the diffusion and centrifuge fields.

The main arguments for this option are that (1) the Europeans and others would have the option of selecting the technology of their choice; (2) since the spread of small centrifuge plants from advanced countries to less industrialized countries could increase weapon proliferation risks, the US should attempt to influence foreign export policies of the advanced countries through the terms of agreements for cooperation; and (3) it could reduce the need for further US expenditures to increase US plant capacity.

On the other hand, Option 3 could increase the risks of nuclear weapon proliferation unless, of course, we successfully influence foreign export policies through restrictive terms within agreements for cooperation.

Recommendation and Rationale

I concur in the Under Secretaries Committee's recommendation to offer to share only diffusion technology, but with some qualifications which are summarized as follows:

1. It is doubtful that an offer of a multinational diffusion plant incorporating advanced US technology will appreciably slow down the development of centrifuges by those countries so engaged. We should be prepared to consider cooperation in this effort, but not as a part of our initial offer because we could be giving away, prematurely, good bargaining counters.
2. We do not want to oversell gaseous diffusion technology or exaggerate the potential risks in gas centrifuge technology because we may, at a later date, choose the centrifuge technique ourselves. It may also then be feasible to cooperate in the centrifuge field with friendly foreign governments, if adequate security precautions could be arranged.
3. We should make no effort to force entry into the management of European diffusion operations. They may be interested in improving the enrichment process they ~~clearly not at the expense of sacrificing their independence.~~ our technology, but clearly not at the expense of sacrificing their independence.

I recommend that you approve Option 2: (1) exploratory talks with the Commission of the European Communities, the member States of EURATOM and the UK on the possibility of assisting in the construction of a multinationally owned and operated diffusion plant, and (2) similar talks, if requested, with other friendly countries such as Japan, Canada and Australia. This option, as qualified above, would be responsive to varying degrees of expressed interest by several of our allies in weighing US diffusion technology as an alternative to centrifuge development.

At Tab A is a proposed memorandum to the Chairman of the Under Secretaries Committee which states that you approve exploratory talks on cooperation with the Commission of European Communities, the UK and other allies in the uranium enrichment field with the qualifications I have set forth.

Additional Considerations

The majority of the Joint Committee on Atomic Energy (JCAE) would probably support an offer to share diffusion technology under adequate security controls with equitable compensation. The Committee has, however, a strong antipathy to sharing centrifuge technology because of potential risks for nuclear weapon proliferation and our presumed lead in the field. Consultations with the JCAE members would be held before moving ahead with exploratory talks.

As a next step, we should review what still needs to be classified in the diffusion process and the overall security implications of the centrifuge process. This does not affect the present recommendation since it is agreed that sharing diffusion technology on a classified basis presents no unreasonable risks.

At Tab B is a proposed National Security Study Memorandum requesting such a review.

RECOMMENDATIONS:

1. That you approve the memorandum to the Chairman of the Under Secretaries Committee at Tab A, which authorizes exploratory talks on cooperation in the diffusion field.

APPROVE   *R*   DISAPPROVE \_\_\_\_\_ SEE ME \_\_\_\_\_

2. That you approve the proposed NSSM at Tab B which requests a review of what needs to be handled on a classified basis in the diffusion field and of the overall security implications of the centrifuge process.

APPROVE   *R*   DISAPPROVE \_\_\_\_\_ SEE ME \_\_\_\_\_

SECRET

NATIONAL SECURITY COUNCIL  
WASHINGTON, D.C. 20506

September 14, 1970

MEMORANDUM FOR :

ACTING CHAIRMAN, NSC UNDER SECRETARIES COMMITTEE

SUBJECT: Proposed Program of International Cooperation in the  
Uranium Enrichment Field

The President has considered the recommendation of the NSC Under Secretaries Committee, as contained in your memorandum of February 26, 1970 and reaffirmed in your memorandum of April 26, 1970, regarding a program of international cooperation in the uranium enrichment field.

The President has approved, subject to appropriate prior consultations with the Joint Committee on Atomic Energy, exploratory talks with the Commission of the European Communities, the member States of EURATOM, and the United Kingdom on the possibility of the United States assisting in the construction of a multinationally owned and operated gaseous diffusion plant to be located in Western Europe.

Additionally, the President has decided that the United States will be prepared, if requested, to discuss the possibility of similar cooperation with other friendly countries, particularly Japan, Canada and Australia.

The President has noted and approved in principle the negotiating strategy submitted by the NSC Under Secretaries Committee. He has also noted that the United States would insist that any related enrichment facilities and their products would be subject to meaningful safeguards and adequate security controls, and that the United States would give preference to multilateral control and ownership.

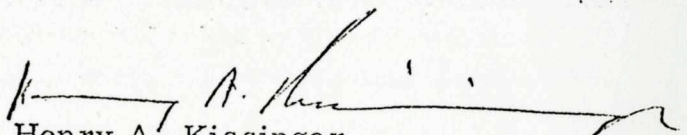
The President has approved the recommendation of the NSC Under Secretaries Committee subject to the following qualifications:

- The United States position should not be presented as a major cooperative program conditioned upon a continuing United States voice and participation in the actual management of any facilities.
- The United States shall be prepared not to hold back any technology in the gaseous diffusion process.

SECRET

- Regarding any information on the United States gas centrifuge program, it should be stated only that there is no authorization to discuss the gas centrifuge program and that the United States Atomic Energy Commission's gas centrifuge program is developmental in nature.
- The United States position on sharing of diffusion technology should not be represented to the Joint Committee on Atomic Energy as a means of impeding foreign gas centrifuge development. This development, especially in Europe, is an ongoing program and would probably not be curtailed by an offer to share diffusion technology unless the economics of the diffusion process were markedly more advantageous.

Noting that the NSC Under Secretaries Committee will report the results of these talks together with further recommendations as soon thereafter as possible, the President has additionally requested interim reports on the consultations with the Joint Committee on Atomic Energy and on the initial discussions with the United Kingdom.

  
Henry A. Kissinger

cc: The Chairman, Atomic Energy Commission

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NATIONAL SECURITY COUNCIL  
WASHINGTON, D.C. 20506

September 14, 1970

National Security Study Memorandum 101

TO:           The Secretary of State  
              The Secretary of Defense  
              The Director of Central Intelligence  
              The Director, National Security Agency  
              The Director, Federal Bureau of Investigation  
              The Chairman, Atomic Energy Commission  
              The Director, Office of Science and Technology

SUBJECT:      Review of Security Requirements regarding Uranium  
              Enrichment Technology

The President has directed a review of United States security requirements to determine whether a need continues for the classification of uranium enrichment technologies and, if so, to what extent.

This study should take into consideration the security interests involved in the classification of both the gaseous diffusion process and the gas centrifuge process. The study should also consider the relations of these security interests to the dissemination of these technologies to foreign governmental or non-governmental bodies. Where appropriate, the study should identify and provide the rationale for the classification of any particular elements of uranium enrichment processes which are considered more sensitive than others.

The President has directed that the United States Intelligence Board perform this study. For the purposes of this study, the United States Intelligence Board shall include representatives of the addressees and a representative of the Assistant to the President for National Security Affairs.

The study should be submitted to the NSC Review Group by October 29, 1970.

  
Henry A. Kissinger

cc: The Director, Arms Control and Disarmament Agency

The Chairman, Joint Chiefs of Staff

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The Director, Office of Management and Budget



UNDER SECRETARY OF STATE  
FOR POLITICAL AFFAIRS  
WASHINGTON

October 30, 1970

SECRET - EYES ONLY

Dear Henry:

Glenn Seaborg told me the other day that one of the AEC Commissioners had heard through an American commercial source who has connections in Europe, that there is a movement afoot in Europe, possibly originating with France, to collaborate with Canada on a consortium for a uranium enrichment plant utilizing cheap Canadian hydroelectric power. There was some thought that Trudeau might approach the President on it.

It seems to me that from our standpoint a plant in Canada would be much more desirable than one in Europe, even though I suppose because of the cheap power it might be commercially more competitive with our own plants. I do not think that we can or should do anything about this information at this time. I would hope that we will soon be able to shake the Joint Committee loose on letting us talk to the Europeans about an enrichment plant, and if there is anything to this report it should emerge at that time.

You will also recall that Nakasone talked about a consortium with Canada.

Sincerely,

U. Alexis Johnson

The Honorable  
Henry A. Kissinger,  
Assistant to the President  
for National Security Affairs.

SECRET - EYES ONLY